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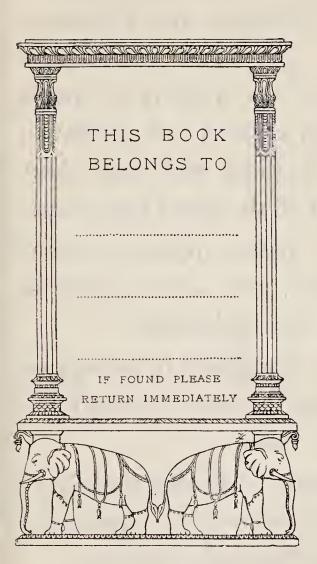
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"The strong thing is the just thing"

Carlyle

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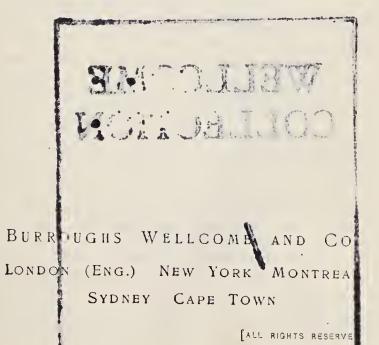
Dhanwantari, the 'Health-bestowing One,' was the Vedic father of medicine, and physician of the gods. He is said to have arisen from the sea, when it was being churned for the beverage of immortality. He was accounted master of universal knowledge, and was the first instructor of the healing art to the Hindoos, and to him is said to have been revealed, by Brahma, the Ayur-veda, one of the sacred books on medicine.

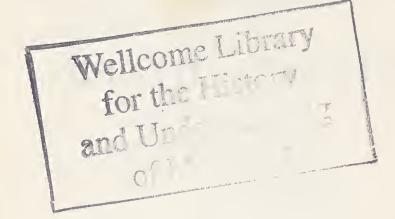
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# NURSE'S DIARY

1907-8



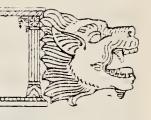


WELLCOME

1370



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A Nurse and Patient
From an MS. of the XIII century



 $\label{eq:ANURSE} A \ \ \mbox{Nurse}$  From an MS. of the XIV century

# THE EVOLUTION OF THE HOSPITAL NURSE

THE antiquity of nursing dates back to a period coeval with the Creation, for, from the time when the first mother cared for her child, the desire to succour the weak and helpless was implanted in the human breast.

Even the lower creation is not without this instinct, and exhibits sympathy with fellow-suffering. There is little doubt that, even in pre-historic communities, some attempt was made to relieve the needy, and to administer to the sick. Prehistoric woman was probably impelled by this motive, when her lord lay stricken by a blow from a club in a tribal fray, to foment the wound with the infusion of some herb of healing.

Unfortunately, both record and tradition are silent for many centuries on the subject of nursing, and it is not until about five hundred years before the Christian era that we have any evidence of the separate practice of the nurse's calling. About this period there is reliable evidence of the existence of a hospital which was founded by a king in Ceylon.

The attendants who waited on the sick in the Greek abatons, or waiting-rooms, that were attached to the temples in which the principles of Æsculapius were practised and venerated, probably also acted in the capacity of nurses. To these temples of healing, patients came from great distances to place themselves under the care of the priest-physicians. The ritual imposed sleep within the temple precincts, in long corridors that did duty as wards, and it is very probable that those who were in a great state of weakness received the administrations of the numerous attendants attached to the temple. In ancient Greece, poor citizens who were sick always found admission to the houses of the wealthy, where they were nursed by the women until they were able to depart.

The history of nursing goes hand in hand with that of hospitals. Historians state that the Aztecs had hospitals for

the sick in ancient Mexico long before the advent of the Spaniards; and during the latter period of the Roman Empire, hospitals became fairly common in many of the large cities. Fabiola, a Roman matron devoted to good works, established a house in the country for the sick and infirm about A.D. 380, and this institution became celebrated throughout the then known world.

With the foundation of hospitals there arose a special class of nurses whose duty it was to search out and convey to these institutions those who required aid. They were called Parabolani, probably in consequence of the hazardous nature of their duties. Gibbon states that the Parabolani of Alexandria were first instituted during the plague of Gallienus A.D. 450. Besides these professional nurses, there were many other pious individuals who, in order to do good deeds, voluntarily devoted themselves to the care of the suffering.

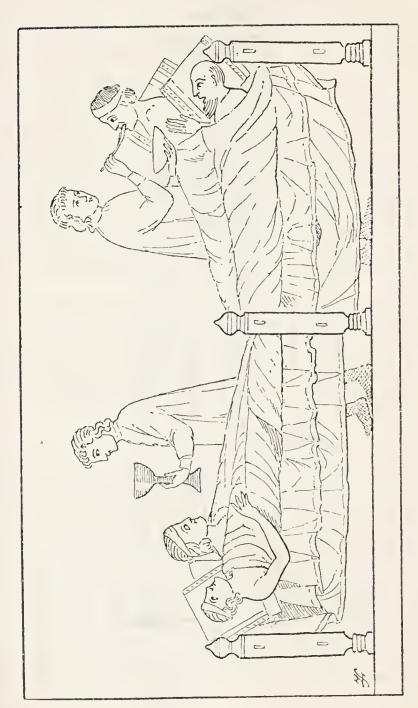
With the advent and spread of the Christian religion, whose followers were enjoined to practice mercy, and to give relief to the sick and suffering, hospitals and institutions for relieving the poor and helpless were established in many European cities. They were placed under the charge of the church deacons, deaconesses and other officials, who constituted a regular body for the care of the sick and needy.

Soon after the Crusades, many other special charitable orders of nurses were organized, such as the Brothers of St. Andrew, the Black Sisters, the Hospitallers, Knights of the Cross, Sisters and Brothers of Charity, Knights and Ladies of St. John and the Brothers of the Holy Ghost. The last order was founded by Guy de Montpelier, who established a hospital in that city. This hospital, together with seven other institutions of a similar character, and two under the same direction in Rome, are first mentioned in a bull of Pope Innocent III. in the year 1198. This order spread over the whole of Europe, and rapidly increased in wealth and power. Although it was largely a secular institution, in Italy it remained exclusively clerical, where the duties performed by the brethren were to nurse the sick, and to relieve the poor and helpless.

The first of these orders established exclusively for women was that of Saint Elizabeth, which was founded in



A Nurse From an MS. of the XIV century



NURSES FEEDING AND ADMINISTERING MEDICINE TO PATIENTS From an MS. of the XIV century

the year 1225 by Elizabeth, daughter of Andrew II. of Hungary, and wife of Ludwig, Landgrave of Thuringia. This charitable woman also founded two hospitals, one in Eisenach and the other in Marburg. At first the "Sisters of Elizabeth" confined their attention to the nursing of sick women only, but, in later times, we find that they administered to the needy of both sexes. This order for women was the forerunner of many others of a similar charitable character. Following it, the orders of St. Protais and St. Gervais were founded in France, and about the same period houses were established in Roncesvalles and Burgos.

In 1409, Joseph Gilaberto established an order in Valencia for the special purpose of nursing the insane, which is the first recorded evidence of a humane treatment of lunacy.

Among other orders that flourished at this time, that of St. Catherine should be mentioned, whose members nursed "poor and strange women and girls for three days, and buried those who died in the prisons or who were found dead in the streets."

Soon after the establishment of the Hôtel-Dieu, in Paris, it is recorded that thirty-eight male and thirty-eight female nurses were appointed to attend the patients in the hospital. Apparently they belonged to no religious order, for it is not until a later period that it is stated that their duties were performed by the "Sisters of Mercy," who still act as nurses in the hospitals in many countries on the Continent.

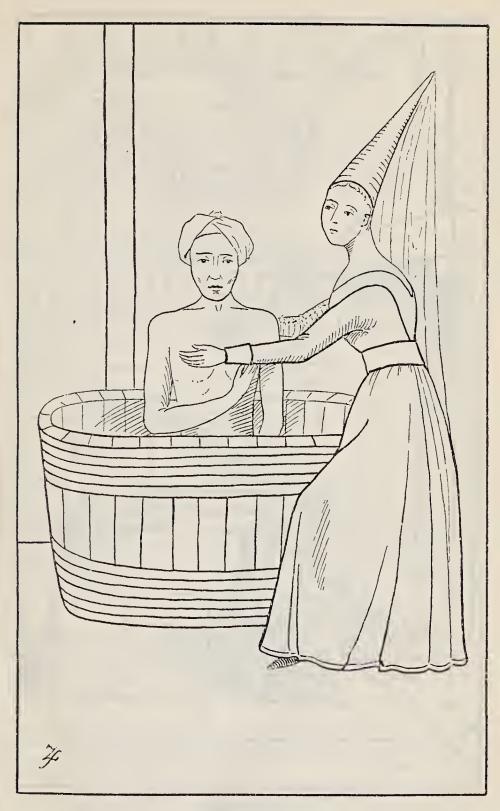
One of the most remarkable charitable organizations of the Middle Ages was called the "Brothers of Mercy," and was founded by Juan di Dios in Granada, in the year 1534. The brotherhood consisted of laymen, who were permitted to enter the order between the ages of eighteen and twenty-one, and who took vows to devote their lives to nursing the sick, irrespective of faith or creed. The progress of the order was remarkable, and within a hundred years they had founded a hundred hospitals. At one period, in Spain and the West Indies, the Brothers of Mercy had under their control and administration one hundred and thirty-eight hospitals, containing 4140 beds, in which 150,000 sick persons were treated annually. This order is still in existence in many parts of the world, and the original hospital, established by

the founder in the XVI century, still carries on a noble work in Granada. In the reliquary of the beautiful church attached to it, the bones of Juan di Dios, the founder, are preserved in a magnificent silver shrine, together with the basket which he used to carry filled with bread for distribution to the poor.

Of a similar character to the Brothers of Mercy were the "Obregons," founded about the year 1600, with the object of nursing and praying with the sick, and urging them to repentance. Following them came the "Bon Fils," who were established in Flanders in 1615, and were recruited from the tradesmen class. Like the "Confraternita della Perseveranza," which was founded in Rome, in 1663, the brothers were instructed in the duties of sick nursing, and had for their care any strangers or travellers who fell ill in the taverns.

In the year 1617, Vincent de Paul, a famous priest, preaching before an influential congregation, drew their attention to the case of a poor family that had fallen sick, and urged, in eloquent language, the co-operation and sympathy of his hearers in the relief of suffering. His words roused those present to such interest and enthusiasm that several ladies, headed by Louise de Marillac, the wife of Legras, secretary to Mary de Medici, at once set about organizing a nursing sisterhood. In a few weeks, its members were actively engaged on their errands of mercy, both in private houses and in hospitals. Aided by the Church, they soon became recognized as an order, and received the title of "The Sisters of Mercy," a name which is now known throughout the civilized world.

In 1636 the sisters established a home for the care and education of women, and a few years later they opened a foundling hospital and a home for aliens. Within a century they had established 290 stations, and had 1500 members. Women were accepted as candidates for the sisterhood between the ages of eighteen and twenty-four, and on becoming sisters undertook to devote the remainder of their lives to nursing the sick and helpless, and to other good works connected with the Church. In Rome, during the XVII century, the sisters were the first to care for all those suffering from infectious and acute diseases, who were not at that time admitted to the hospitals. The sisterhood still carries on



Nurse Bathing a Patient From an MS. of the XV century



A SICK ROOM

Nurse preparing food for Patient

From an MS. of the XV century

a useful work in Europe, and its members perform the duties of nursing in many of the hospitals in France, Italy and Spain.

Probably the first nurse whose services received Imperial recognition was Sister Martha, a member of this Order, who performed deeds of the greatest devotion during the wars of Napoleon, and received from the hands of the great Emperor the Cross of the Legion of Honour.

During the latter part of the eighteenth, and the early portion of the nineteenth century, a period when hospital management was at a very low ebb, nursing, both in public and private institutions in this country, was of the most wretched description. The women who performed these duties were drawn from the ranks of the lowest type of domestic servants, who took up nursing as a last resource when they had lost their characters. They were generally coarse-faced, heavy of limb and foot, and brutal in speech. They crawled up and down stairs and about the wards in dirty dresses and aprons. Often inebriates, and even thieves, they were dreaded, by the patients and distrusted by the medical staff. In those days the doctor, on entering a ward for his daily round, would probably see a figure rise from the floor, drop a scrubbing-brush into a bucket beside her, and unroll a filthy apron from her waist. This was the nurse and scrubber combined. The night-nurses were generally non-resident, and came on duty at eight p.m., leaving at nine the next morning. Engaged in their domestic duties at home during the day and allowed no food by the hospital authorities, they were paid 10s. 6d. per week to sleep in the wards.

Charles Dickens has immortalized the nurse of this period in the person of "Sairey Gamp," whose vagaries, recorded in *Martin Chuzzlewit*, are too well known to be recounted here.

The Germans were the first to turn their attention to the reform and improvement of the nursing art, and about 1830, schools for training women to nurse the sick were established in Berlin by Dieffenbach, Kluge and Gedike, and in Göteborg by Ruhstaat. In 1833, Pastor Fliedner, a born philanthropist, saw the need of the services of trained women

to minister to the sick, and conceived the idea of reviving the office of deaconess, which had been instituted by the early Christian Church.

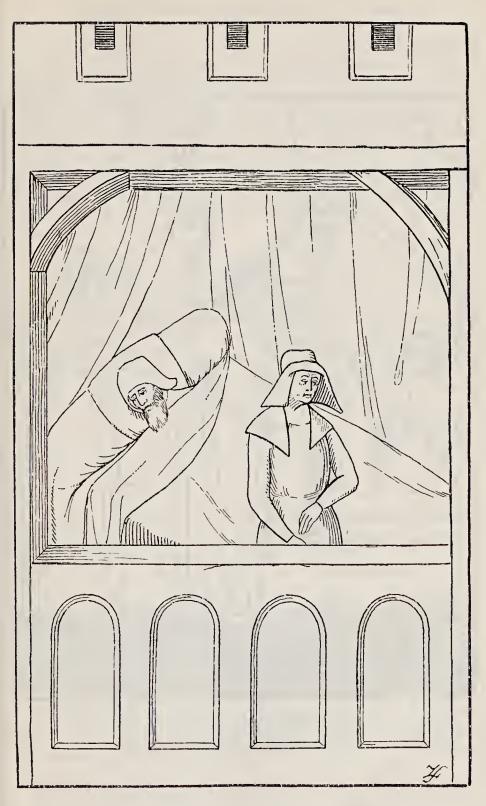
He soon organized a little band of devoted helpers, and founded a Protestant Institute somewhat on the lines of the Roman Catholic sisterhoods, but without their restrictions.

The deaconesses were fettered by no vows, but consisted of those who voluntarily decided to devote their lives to the service of the sick and helpless. The code of rules was simple. No member was to be under the age of twenty-five, and although engaged for a period of five years, she was at liberty to leave the institution at any time. Candidates were solemnly received into the community, and consecrated to the work by the laying on of hands by the pastor. The deaconesses received no salary, but had free board and uniforms, the latter consisting of two blue cotton gowns and two aprons, which were supplied every year. Every five years they received a new blue woollen gown and a black alpaca apron. Their out-door dress consisted of a long black cloak and a bonnet which fitted over the white muslin cap they wore indoors.

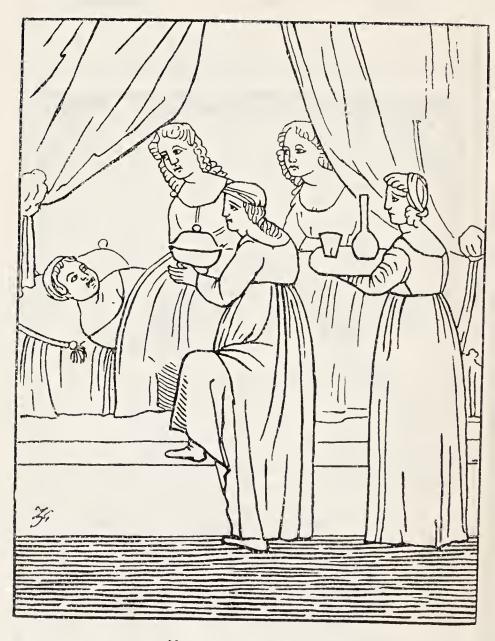
On October 13, 1836, Fliedner secured a deserted factory at Kaiserwerth on the Rhine, and opened it as a deaconesses' hospital and training-school. The wards were fitted with old furniture, roughly repaired, and cracked earthenware which he had begged, while the stock of linen consisted of six sheets. But undaunted by want of means, the little band of seven deaconesses who formed the staff of the institution soon increased and flourished, and what the hospital lacked in equipment was made up in cleanliness. By 1864, the institution had a hundred branches in different parts of the world, and a membership numbering four hundred and thirty.

In the history of British nursing one name stands preeminent—that of Miss Florence Nightingale—not only for the noble work she performed at the time of the Crimean War, but also for her labours in drawing attention to the condition of the nursing art, which had fallen into such a deplorable state in this country.

It was about the year 1845 when Miss Florence Nightingale first directed her attention to the reform of hospital nursing.



Nurse and Patient From an MS. of the XV century



Nurses and Patient
From a Woodcut of the XV century

Desirous of acquiring the best training she could, and with the object of obtaining experience in other countries, she went abroad to France, Germany and Italy, and was not long in perceiving wherein lay the great mistakes in English hospital organization and nursing of the sick. On the Continent the nursing was done by sisterhoods, the members of which were entirely devoted to the service of the hospitals and to tending the sick in their homes. They were not paid; it was their life and their religion. Such were the Sisters of St. Vincent de Paul in France, and the Deaconesses, founded by Pastor Fliedner, in Germany.

Miss Nightingale visited Fliedner's institution at Kaiserwerth to study his methods of training and organization, and in 1849 she enrolled herself as a voluntary nurse to the establishment. She returned to England full of enthusiasm and schemes to improve the methods of nursing, which had become a crying evil in our hospitals. How she responded to the call of the sick and wounded in the Crimea, and organized a band of willing helpers to fight against disease and death in Eastern Europe is well known to every nurse.

From this period, the art of nursing in this country received an impetus which has placed the British Hospital Nurse in the front rank to-day.

Between 1850 and 1860 the mortality amongst hospital nurses was very high, owing to the bad sanitary and housing conditions in our hospitals. Miss Nightingale drew special attention to this fact, and from her investigations it was found that the total mortality at that time amongst nurses exceeded the mortality among the female population of the metropolis by about forty per cent. After rousing the committees of various hospitals to action on the subject, an improvement eventually took place in the apartments, food and general conditions of the hospital nurse's surroundings. "The loss of a well-trained nurse," says Miss Nightingale, by a preventable disease is greater than that of a good soldier from the same cause. Money cannot replace either, but a good nurse is more difficult to find than a good soldier."

Before 1860, hospital nursing was considered to be a calling which no decent woman of any rank would follow,



Nurses Attending A Midwifery Case From an MS, of the XV century

and it is mainly through the exertions of Florence Nightingale that the hospital nurse has reached her present position. At that period it was seriously questioned by responsible people if hospital nursing could ever be properly carried out by women. In her evidence, given before a Royal Commission, Miss Nightingale's opinion on this point is worth recording. "I think," she said, "that great sanitary civil reformers will always tell us that they look to woman to carry out practically their hygienic reforms. She has a superior aptitude in nursing the well, quite as much as in nursing the sick."

Through her instrumentality, in June, 1860, the Nightingale Home for the training of nurses, now attached to St. Thomas's Hospital, was founded and opened. This was but the forerunner of many other institutions of this character throughout the United Kingdom which have done so much to improve the lot and promote the comfort of those who follow the nurse's calling.

It was not until about 1880 that anything like a distinct uniform became general among British hospital nurses. "Why should the colour of the nurse's dress be black?" queries a writer of the period. To this question no one seemed able to offer a cogent reply, and so the print dress of pink, grey, blue or lavender, which always looks so well and can be kept clean, soon became general in our hospital wards.

From this improvement in the indoor costume, to a suitable uniform for outdoor wear was but a short step. Early in the eighties the simple cloak and bonnet with white strings was introduced with surprising success, for the uniform, now so familiar in our streets, no doubt, at one time, attracted many to the ranks of the trained nurse.

It would be superfluous here to attempt to enumerate the advantages to society at large that have accrued from the proper training of the nurse. That she is a most valued and a most valuable addition to our hygienic requirements and sanitary progress no one can deny. Nursing, at the present day, is one of the important handmaids of medicine. Without the nurse's aid, medical skill is sometimes powerless, and the medical profession in common with the world at large owes a debt to the trained nurse which it is difficult to estimate.



A Nurse
From a Drawing of the XVI century



A Nurse
From a Drawing of the XVI century



"SAIREY GAMP"
A Nurse of 60 years ago



A Hospital Nurse of to-day

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See also page 110

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See also page 117



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SPECIAL CAUTION.—Many attempts are made to imitate 'Kepler' Products, and it is necessary, therefore, to take special precautions against substitution.

# THE GENERAL PRINCIPLES OF NURSING

Introduction.—The following is a brief practical review of some of the more important duties of a nurse. It is assumed that she has a fair knowledge of ordinary hospital nursing, but it often happens, when the training school and the hospital ward are left behind, and the more complex life of private or district work is entered upon, that a nurse finds herself not so well equipped for her duties as she imagined when following the routine of a great institution. In the succeeding pages the needs of district nurses, and those engaged at small country hospitals and in private houses, are more considered than the needs of the nurse in a large hospital or infirmary. In such positions as the former the nurse has not merely to obey instructions, she has to think and plan for herself. Her success depends upon her power to adapt such means as are at hand (often lamentably imperfect) to the needs of her profession. Unless she be prepared to make the most of her tact, common sense and general ability, she can never hope to be in the front rank. Practical experience shows that emotional or spasmodic enthusiasm is a most untrustworthy motive-force when brought into contact with monotonous

It will be convenient to discuss some of the cardinal points which claim the attention of the nurse in the following order:—(1) Sanitation; (2) Ventilation; (3) Cleanliness; (4) Disinfection; (5) Special Duties and General Hints.

#### SANITATION

Drainage.—It is obviously a primary duty of those having the care of an invalid to make all surroundings as healthy as possible. In many houses the drainage system is far from perfect, and where such is the case the patient must be protected against injury from this unfavourable condition.

A simple and easy way to test the drains is to pour a teaspoonful of oil of peppermint down the pan of the water-closet, taking great care not to spill a drop elsewhere; the closet door should then be shut, and the house carefully explored from top to bottom to discover if the odour of peppermint can be detected arising from cracks in the floors, waste-pipes of

sinks, baths, etc. It is well for some person who has not been in contact with the oil of peppermint to do the exploring. Should the nurse discover defects in the drainage system she should report the fact to the patient's friends, and will be wise to transfer all responsibility by promptly reporting the state of things to the physician in attendance. If possible, the patient should be removed. Pending his removal, or if such be impossible, the following precautions should be observed.

Precautions.—Should flaws in the drainage system, or impurity of the water of the house be suspected (they are not uncommon accompaniments of typhoid fever or diphtheria), special care must be taken that harmful influences arising from such causes do not penetrate to the sick room. When it is impossible to remove the patient, or to have the defective sanitary arrangements put right at once, the following precautions should be observed:—(I) All drinking water must be boiled, and a filter recently filled with fresh animal charcoal, or a Pasteur or Berkefeld filter, should be employed. The ordinary cheap domestic filter is worse than useless. (2) The nurse should prepare a solution of the strength and character recommended in the memorandum issued in 1892 by the Local Government Board, and pour this disinfecting fluid down the water-closets and waste-pipes several times a day. It is an excellent disinfectory several times a day. It is an excellent disinfectant, destroying all disease germs, but as it is poisonous it should be handled with caution, and only by the nurse, or under her close personal supervision. This L. G. B. solution is prepared by means of 'Soloid' Corrosive Sublimate, L. G. B., of which two should be dissolved in a quart of water to make the two should be dissolved in a quart of water to make the requisite disinfecting solution. (3) The windows in the passages, etc., especially those near the suspected spot, must be kept wide open night and day, the door of the sick-room at the same time being kept closed. The nurse must contrive that the air thus admitted can escape again without passing through the part of the house where the patient is, and can test the efficiency of her arrangements by burning a fumigating pastille near the place where the sewer gas finds entry, and taking note of the direction in which the vapour travels. If necessary, sheets soaked in carbolic solution should be hung over the doors as in an infectious case. (4) It must be remembered that mere deodorizers, although overcoming some of the unpleasantness of a sick chamber, have no appreciable effect upon disease germs. Above all, the nurse should never fall into the popular habit of smothering one stench with another. A foul atmosphere 'sweetened' with Eau de Cologne, pastille smoke, or an aromatic deodorizer, is an evidence of incompetence on

her part.

Surroundings.—It should be the nurse's aim, from the moment of entering on her duties, to keep all the surroundings of the patient sweet and wholesome. If any of the appurtenances of the sick chamber, such as the curtains and carpets, prove hindrances to attaining this end, they must be removed. At the same time zeal should be tempered with discretion, and the room should not be rendered more bare and comfortless than the special needs of the case demand.

No gas or oil stove should be used in a sick-room unless all the products of combustion are carried up the chimney. In every case where gas is laid on, the nurse should make quite sure that there is no leakage into the room. A very little coal gas, mixed with the air, will have a most depressing

effect on an invalid.

### VENTILATION

Three Essentials.—In providing for efficient ventilation three important points must be considered. (1) The foul air must be got rid of. (2) Fresh and pure air must be admitted. (3) Draughts must be avoided. Under the best circumstances it is very difficult to accomplish these several ends satisfactorily; and in a private house the difficulties are far greater than in a large hospital ward. It is, however, in the private house that the nurse has to be responsible for good ventilation. The following hints, which have many times been proved useful in practice, deal chiefly with the difficulties in airing comparatively small rooms.

Bad Air.—It is scarcely necessary here to dwell upon the evils of bad ventilation, but there are one or two facts about which most of the standard works have little to say, and which are always worth remembering. Foul air is injurious to health, not so much because of changes which have taken place in the relative quantities of the constituents of air, as because of the organic waste materials which are added to it during the process of respiration. This vitiation occurs in an even greater degree when the persons breathing and polluting the air are themselves suffering from illness. An excess of carbonic acid, or a deficiency of oxygen, has

been shown to be much less harmful when unaccompanied by organic particles, such as are continually being given off by the human body. As a rule, however, in the sick-room the one kind of defect in the purity of the atmosphere indicates the presence of the other. The practical value of these facts will be shown presently.

Air Currents.—In every room where there is a fire the tendency is for the air, entering the room at various points, to move towards the chimney. So much is this the case that, when the chief inlet and the chimney are near together, and nothing intervenes to turn the current, a continuous draught may prevail between these two points without the rest of the air in the room undergoing much change. It is important therefore, to distribute the fresh air which has entered so that it may reach all parts of the room. This can be done best by curtains or screens, judiciously arranged. In the same way can be obviated a serious and almost universal defect in the ventilation system of small rooms. This is the draught which enters under the door, and which makes a cold stratum of air right across to the fireplace without rising more than a few inches. All screens should reach the floor; not only in order to distribute this thin layer of fresh air, but also to protect the feet of all persons standing or sitting in the room from what is, in effect, a perpetual cold foot-bath. Since the air nearest the ceiling is the most impure, the windows should always be kept open a few inches at the top. It is generally possible with a little planning to keep any direct draught, so caused, from the patient. It is a good plan to learn the direction of the prevailing air currents of a room with the aid of a candle flame or a light feather. In exposed localities, a change of wind may necessitate rearrangement of the system

Screens.—Knowledge so gained enables the nurse to avoid sitting in the current from the patient to the chief outlet (generally the chimney), a most important matter in all cases of serious illness, and obviously so when there is any risk of infection. In like manner the nurse should make sure that the invalid is not supplied with air which has been respired by any person in the room.

The screens, of which at least two should be in every sickchamber, should be between five and six feet high, hinged in two places, and long enough to shelter a chair. They must fit closely to the floor, and be made of such material as to be draught-proof, easily moved and easily washed. There should always be a window open at night. In cities the night air is always the purest, unless, as is rarely now the case, the sanitary system is old-fashioned, necessitating the emptying of cesspools at night.

A convenient plan to adopt when airing a sick-room, is to place an opened umbrella on the bed over the patient's head, and then to spread a sheet over the umbrella so as to form a canopy under which the patient can readily breathe without

being reached by air currents.

### CLEANLINESS

Surgical Cleanliness.—In no way can the importance of this subject be emphasized more than by stating the fact that practically all the triumphs of modern surgery have been achieved through the adoption of a scientific system of cleanliness. The general public, including the most refined classes who have a horror of all visible dirt, as yet has but a faint idea of what is meant by surgical cleanliness; and it is, therefore, often the duty of a trained nurse to educate up to the scientific standard those among whom she is working. It is scarcely possible in any private house, especially among the classes with which a district nurse comes in contact, to keep the patient and his surroundings scientifically clean. By bearing in mind constantly the chief objects at which to aim, a nurse can hardly fail to make the conditions infinitely better than they otherwise would be in the hands of an untrained person.

When washing patients, care should be taken to perform the task thoroughly, expeditiously and gently. Do not leave unwashed such parts of the body as the neck and under the arms. Always dry every part of the skin thoroughly after washing, and avoid scratching or injuring the patient's skin by wiping it with a hard hem or other rough part of the towel.

Septic Matter.—The great objection to dirt, from a nursing point of view, is that it forms a breeding place for harmful micro-organisms. The eye is a very untrustworthy guide. An untrained person will take vast pains to remove a smudge on the boarded floor caused by soot or mud, but will ignore a drop of pus, sputum, or urine on a rug, because it is not readily seen. As regards the welfare of the patient, however, the difference between the two kinds of dirt is

enormous. No fault can be found with the soap-and-water cleanliness of the charwoman, so long as it is made part of an intelligent and scientific system; alone, it is unreliable.

So far as possible, linoleum or material which can readily be cleansed should replace carpets and rugs. Wherever possible, every article of clothing which has become in the least degree soiled by any discharge should be changed at once. There must be continual vigilance in these matters. To wait until the appointed time to "get the patient ready for the doctor's visit," is to expose the patient to grave dangers. As a general rule, it may be stated that the virulence of septic poisons increases for some time after they have left the body. This is very pronouncedly the case with the virus of typhoid fever contained in discharges from the bowels. The dangers of delay are, therefore, very real. The loathsome practice of covering up filth on the bedding with a layer of clean clothes, and letting the filth itself remain cannot be too strongly condemned.

Preventive Measures.—Floors should be scrubbed with carbolic soap. It is a good plan freely to sprinkle clean coarse sawdust, moistened with carbolic solution (I in 20) or some other efficient disinfectant, over the floor before sweeping it. Dust in sick-chambers is always full of bacteria, and it is better, therefore, to avoid sweeping altogether so long as the room is occupied. Should it be necessary to sweep the carpets, however, an enclosed box containing revolving brushes should preferably be used. The carpets or boards should be thoroughly washed over every day with a cloth wrung out of dilute carbolic acid solution, made by dissolving one 'Soloid' Carbolic Acid, gr. 60, in a pint of water. In washing the patient, water that has been boiled, and some non-irritating soap, such as \* 'Dartring' Lanoline Toilet Soap should be used, and special attention should be directed to parts such as the armpits, umbilicus or navel, toes, etc., where the waste products of the skin accumulate. It is a good plan to sprinkle a little antiseptic dusting powder on such spots after drying them, and also about the nates, perineum and pubes.

Ichthyol has a high reputation in the treatment of various skin affections. When incorporated with a fine superfatted soap like that of \* Dartring' Lanoline, it is of great value

<sup>\*</sup>The 'Dartring' brand appears on all labels of the genuine original Lanoline preparations.

as a preventive agent for use in cleaning bed-sores, freshly cut wounds and boils, and for chaps, chilblains, etc. In roughness, blotches, and eruptions of the skin, the affected parts are treated with water as hot as possible and \*'Dartring' Lanoline Ichthyol Soap. The hot soap lather may be wiped off, and the parts dusted with a simple unscented dusting powder, or allowed to dry by exposure to the air. Application of 'Borofax,' or (when a stronger antiseptic is desired) of 'Phenofax' is employed to produce a sedative, emollient and beneficial effect upon the skin.

All excreta should at once be disinfected by pouring over them some of the disinfectant solution made in accordance with the recommendation of the Local Government Board Memorandum. 'Soloid' Brand Corrosive Sublimate, L. G. B., is used for this purpose, one being dissolved in a pint of water. As soon as the solution has been used, the excreta should be removed from the room, and the utensils carefully cleaned with some more of the solution. If kept for inspection, cover the vessel with a towel wrung out of the solution. Nothing should, however, be added to urine which may be wanted for analysis. Such should be saved in a clean vessel, which must at once be covered, and labelled with the name of the patient, and the date and hour at which it was passed.

Personal Cleanliness.—Finally, the nurse must exercise the most exact care in keeping her clothes and person up to the highest standard of cleanliness. A soiled pocket handkerchief should never be tolerated. A tooth brush, with some antiseptic dentifrice, such as 'Opa,' must be used at least three times daily. The finger-nails must be scrubbed thoroughly, and \*'Dartring' Lanoline Toilet Soap employed in the process. \*'Dartring' Lanoline Ichthyol Soap is also of great service to nurses in keeping the hands smooth, supple and elastic, and free from blemishes of all kinds. The soothing, emollient and antiseptic powers of 'Borofax' and 'Phenofax' specially commend these products to nurses. During work the arms should be bare.

Carbolic acid is, perhaps, the best general antiseptic, but for some purposes mercury perchloride and mercuric potassium iodide are preferred. Carbolic acid is now prepared as 'Soloid' Carbolic Acid in three strengths, containing

<sup>\*</sup> The 'Dartring' brand appears on all labels of the genuine original Lanoline preparations.

respectively five, twenty and sixty grains. Twelve of those of gr. 20 strength are put up in a tube, and form an extremely convenient means of carrying carbolic acid from place to place without danger, and of preparing solutions of any desired strength at the instant they are required. Thus an antiseptic solution for rinsing the hands may be prepared by dissolving one of the gr. 20 strength in a quarter of a pint of water, but it is pointed out that this solution is not of a strength sufficient to ensure complete asepsis. For details regarding the subject, reference should be made to the article on the Rules of the Central Midwives' Board, page 143.

### DISINFECTION

Heat.—Heat is an efficient disinfectant when used under precise and known conditions. If dry disinfection be employed, it should be conducted at a temperature of 130° C. to 140° C. [234° F. to 252° F.] for one to four hours according to the nature and bulk of the material dealt with. Much more trustworthy is disinfection by steam at 100° C. [212° F.], the best results being obtained by "current" steam. An exposure of from half to one hour in boiling water, or steam at 100° C. [212° F.], destroys the majority of pathogenic organisms. The difficulty ordinarily is not so much to kill the organisms as to get at them and make sure that they are subjected to the requisite temperature. Imperfect results depend upon the fact that the microbes are often protected from the heat to a greater or less extent by their position in the material to be disinfected. Chemical agents such as corrosive sublimate or mercuric potassium iodide are trustworthy if used in sufficient strength, brought into intimate contact with the infected material, and allowed to act for a sufficiently long time. Some disease germs are very tenacious of life, and therefore very thorough methods must be used for their destruction. The popular custom of sprinkling some sweet-smelling deodorant is altogether futile.

Antiseptic Precautions.—In a desquamating scarlet fever case, the whole skin of the patient should be well rubbed, under the direction of the medical attendant, either with a solution of eucalyptus oil ('Eucalyptia') in olive oil or with some other antiseptic, to prevent the minute scales being distributed in the air. 'Soloid' Carbolic Acid, dissolved in warm olive oil, is also used for this purpose. It has very

little smell when cold, but, if desired, the solution may be perfumed with Eau de Cologne. In cases of diphtheria, all cups, spoons, etc., which have been used by the patient, should be sterilised by the nurse herself before they are taken from the sick-room. All the excreta (especially in cholera and typhoid) should immediately be treated with some strong germicide, such as the antiseptic solution made with 'Soloid' Corrosive Sublimate, L. G. B., referred to on page 35. With an infectious case in a private house, a sheet well soaked in carbolic solution (I in 30 or 40) should be hung over the door, and kept moist. In washing the patient, pledgets of absorbent cotton wool should be used instead of sponges, and afterwards burned. Pleated, Compressed Absorbent Cotton Wool, 'Tabloid' Brand, is convenient and suitable. All bed-clothes should be boiled or steamed for an hour after removal. Until this can be done they should be kept in L. G. B. solution, and they must not come into contact with the household soiled linen. The bed-clothes should be thoroughly rinsed, if they have been placed in the L. G. B. solution, so as to remove all traces of corrosive sublimate. Any mattress into which any septic discharge has soaked must be immersed at once in some strong disinfectant. It is best to leave to the medical attendant the decision as to whether such things must be destroyed.

Obstetric Precautions.—In obstetric work, the consequences of septic infection are often very serious. Those engaged in this branch of nursing should study and carry out carefully the directions given in the article on the Rules of the Central Midwives' Board (see page 143).

Fumigation. — Fumigation, to be efficient, must be carried out very thoroughly. The vapour of burning sulphur (sulphurous anhydride), 'Soloid' Paraform, or chlorine gas is a trustworthy agent. It is a good plan to use two different agents in succession, since germs differ in their susceptibility to bactericides. The following process is very thorough, and is useful where it is important to avoid all risk of further infection. (I) Strip the room as bare as possible, scrub the floor, woodwork, etc., with soft soap and water, open all cupboards and drawers and spread the contents about the room. (2) Before the room is dry, stop all outlets and burn one pound of sulphur to every thousand cubic feet of air. Two or three pounds will suffice for an ordinary bedroom; it should be burned in several different places. The

best plan is to break up the sulphur, put it in a metal container, and pour some methylated spirit upon it before lighting. The metal container should be placed in a wide shallow vessel containing cold water. (3) Close the room hermetically for twelve hours. (4) Open the windows for several hours. (5) Put the same quantity of chlorinated lime into a large basin, and fill up with water mixed with a few ounces of ordinary dilute sulphuric acid. (6) Stir up with a stick, and again seal up the room for twelve hours.

(7) Ventilate freely as before. Much trouble is saved by the use of syphons and cylinders of sulphur dioxide instead of burning sulphur. 'Soloid' Paraform is used as follows: Take one for every thirty cubic feet of space. Volatilize on a dish over a spirit lamp, and leave the room with all outlets carefully stopped for at least twelve hours. All fabrics, such as blankets, sheets, etc., should be spread out as much as possible, or, preferably, suspended from a line. Clothing should be unfolded, and all pockets turned inside out, so that the whole surface is exposed to the vapour. It is important that cupboards and drawers be left open, and that, where possible, all steel and iron goods should be removed. Although having great penetrating power, the vapour will not affect bacteria enclosed in books or between folds of material.

Personal Clothing.—The clothes which the nurse wears in the sick-room must be treated with the same rigour as those of the patient. It is a good plan to have two tin boxes, one for the working and the other for the outdoor costume. When changing, the nurse should take a bath, and see that the two sets of clothing do not come into contact. In obstetric cases, it must be remembered that gloves have several times been the carriers of infection. Pocket handkerchiefs also are liable to spread disease.

In the absence of medical aid, the table given on pages 154 and 155 will be useful in deciding as to the period of quarantine required for absolute safety after infectious

disease, or after exposure to the risk of contagion.

### SPECIAL DUTIES AND GENERAL HINTS

Under this heading are given a few hints upon duties requiring special skill and care for their proper performance.

Enemata, etc.—The nozzle of the enema syringe must be well lubricated, preferably with 'Hazeline' Cream or 'Borofax,' and introduced very gently, with a slight twisting movement.

The buttocks are then compressed on the nozzle. A larger quantity of fluid may often be retained by introducing it very slowly, and by having the buttocks raised so that the fluid flows downwards. If the rectum be irritable, there should be an interval of a few seconds between each compression of the bulb of the syringe. Extreme care must be taken not to inject air when administering an enema or a vaginal injection, by making sure that the fluid fills the tube and nozzle at the moment when it is inserted. Clumsiness, sufficient to cause unnecessary suffering, is quite inexcusable in a nurse, and is sure to be remarked by the patient and the patient's friends. When there is the least difficulty, owing to external swelling, etc., as is often the case after parturition, the nurse must never fail to obtain a good view of the parts so that she may know exactly what she is doing. This rule applies with even more force to the use of the female catheter. Care should be taken that the catheter does not pass into the vagina. If this happen the instrument must be washed thoroughly in weak carbolic lotion before again being used.

The ordinary soap-and-water enema, such as is employed to unload the bowel, may, if desired, have two ounces of olive oil or castor oil added to it. The best way of giving a turpentine enema is to stir a fluid ounce of ordinary oil of turpentine into half a pint of starch mucilage, made by boiling one dessertspoonful of starch in ten ounces of water. It is always better to have such things prepared by the patient's chemist. At times it is advisable to give the turpentine with soap and water instead of with starch. Glycerin is now frequently ordered as an injection into the bowel. A special glycerin syringe should be used. As a gentle laxative it is better to administer glycerin in the form of Glycerin 'Enule' Suppositories.

Suppositories.—The old-form glycerin suppositories, made with gelatin basis, have been superseded by those prepared by Burroughs Wellcome & Co. The latter contain 95 per cent. of glycerin, whereas the percentage in the older variety was much less, and the size considerably larger than that of the B. W. & Co. preparation. In addition to this important advantage, a special modification in shape has been made, as shown in the illustrations on page 80. As is well known, the usual shape of a rectal suppository has been that of a cone with a rounded apex, but the difficulty of readily introducing it into the rectum and of ensuring its retention, on account of

the action of the sphincter muscle, has led to the introduction of this improved shape. The great advantage of the 'Enule' Brand Suppositories becomes apparent when it is remembered that the pointed bulbous end is inserted first, and that as soon as the greatest diameter has been passed, expulsion of the 'Enule' Suppository is prevented by the contractile force of the sphincter, which makes retention of the ordinary conical shape often so difficult. This improvement has received great commendation from the medical profession, and its adoption has become general. Each 'Enule' Suppository is encased in a covering of tin-foil which is placed in position by machinery, thus avoiding contamination during the process. The protecting covering prevents the ingredients from deterioration by exposure to the air. The sheath of pure tin-foil is readily removed at the moment of using. The 'Enule' Glycerin Suppository possesses the further important advantage that it will keep for any length of time in all climates and yet retain its complete activity. In addition to Glycerin, a number of medicinal and nutrient 'Enule' Rectal Suppositories are prepared in the improved shape. A little 'Hazeline' Cream may be smeared over an 'Enule' or other suppository if it be thought that there may be any difficulty in inserting it.

It may be appropriately mentioned here, that the arbitrarily coined word 'Enule' is a brand which designates fine products prepared by Burroughs Wellcome & Co. To ensure the supply of pure and reliable preparations, this brand should always be specified when ordering, and the nurse should ascertain that no other make is substituted.

Feeding by the Rectum.—Although the old-fashioned nutrient enemata are now to a great extent superseded by the Predigested Meat and Milk 'Enule' Suppositories, which afford by far the best means of feeding by the bowel, it is necessary for a nurse to know how to administer nutrient fluids per rectum, as some practitioners still prescribe them. Stimulants also are sometimes thus administered. The enema syringe should be small-nozzled. A soft catheter connected with a funnel into which the food can be poured slowly, is even better than a syringe. In practice, an ordinary two-ounce glass "urethral syringe" has been found to answer admirably for children. It is vitally important not to irritate the bowel, or in any way to provoke expulsive movements.

The food should be injected slowly and in small quantities; from two to four ounces at a time is generally sufficient.

The Predigested Meat 'Enule' Suppositories and Predigested Milk 'Enule' Suppositories contain these foods in a peptonised and ready assimilable form. These products are markedly superior to ordinary beef tea and milk, and have the valuable quality of keeping well. They are readily introduced even by unskilled persons, and cause no discomfort. The sheath of tin-foil which protects them from contamination must, of course, be removed before use. A few ounces (3 to 6) of warm water (preferably distilled) should be injected and retained occasionally if the patient be quite unable to swallow. This is necessary to combat the thirst common in cases requiring rectal feeding.

Massage.—This form of treatment has received much attention of late years, and has become very popular. Special training and some practice are necessary in order to carry out in detail the more elaborate methods now in vogue. Massage is essentially a thorough kneading and rubbing of the muscles with a minimum of friction to the skin. Each muscle should be rubbed from end to end, the pressure being regulated according to its thickness, and chiefly exerted in the direction of the heart, so as to aid rather than retard the venous circulation. Where the muscles are very thick and fleshy, a firmer touch, and a kneading or pounding action, are advisable. As a lubricant to the surface, 'Borofax' is found to answer admirably, since it never causes irritation as do certain of the other preparations commonly used for this purpose. On the contrary, 'Borofax' relieves irritation and is a very soothing and emollient application for massage. In some circumstances dry massage is employed with or without the use of a dusting powder, such as the finest powdered oatmeal.

Baths.—Whenever possible, a themometer should be employed to test the heat of the water before giving a bath. No one can judge the temperature of water correctly by the hand. In no case should a nurse allow a patient to enter a bath until she has ascertained its temperature. If a thermometer be not available, the nurse can roughly test the temperature by immersing her hand, or, better still, her elbow, in the water. Patients have at times been placed in baths at temperatures far too high, and have even been fatally

scalded. If the rule of first ascertaining the temperature be always adopted, this will be unlikely to occur. It has also happened that a child has entered a bath containing water almost at boiling point, while the nurse has left for a moment to fetch cold water to add to it. Such a mistake could not occur if the rule were followed of putting in the cold water first, and adding the hot until the required temperature was reached. The water for a cold bath should be from 65° F. (18·3° C.) downwards; for a tepid bath it should be about 90° F. (32·2° C.); For a warm bath 98° F. (36·7° C.), or about the normal temperature of the body; and for a hot bath from 98° F. (36·7° C.) to 106° F. (41·1° C.). Occasionally temperatures other than these are recommended, but it is best for a nurse, acting on her own responsibility, not to exceed those here given. The effect of a bath is influenced quite as much by its duration as by its original temperature. As a rule, in the case of an invalid, from five to ten minutes is quite long enough. When the relaxing effects of a warm bath are desired, or when it is sought to influence the general temperature of the body—as in the case of typhoid fever—the patient may of course be required to remain in the water for a longer time. Warm and thoroughly dry towels, bath-sheets and clothing, and the avoidance of delay during the drying and dressing processes will always enable a patient to avoid "catching cold" after a bath.

Vapour baths can easily be arranged without moving the patient from his bed, by means of a suitable steam kettle. A waterproof sheet should be placed under the patient, and the bed-clothes raised upon a suitable cradle. The blankets should be well tucked in at the sides, and steam admitted from the kettle. Needless to say, the whole process requires continual vigilance on the part of the nurse in charge. It is well to have in readiness, wherever possible, a well-warmed bed, into which to transfer the patient immediately the steaming and drying processes are ended. Further particulars of the baths in general use are given on page 63.

Poultices.—Crushed linseed is better than linseed meal for making poultices. The former contains all the oil of the seed and retains the heat longer. The basin in which the poultice is to be made is warmed by allowing boiling water to stand in it until the moment it is required. It is then emptied and as much boiling water as necessary is poured in; then the nurse, stirring briskly and constantly with a spatula

in one hand, drops in a sufficiency of the crushed linseed with the other. This should be done carefully so as not to get the poultice too stiff, as the linseed thickens if the water is boiling. Experience alone will teach the exact quantities of each ingredient to use, but the quantities usually employed are four ounces of crushed linseed to half a pint of boiling water. With a spatula or a broad table-knife, the mass is spread quickly and evenly over a piece of soft linen or calico cut to the same shape as the poultice it is desired to make, but about an inch-and-a-half larger in each direction. Usually the poultice, when spread, should be about half an inch thick. The spatula should now be dipped in boiling water, and run quickly two or three times over the surface of the poultice. This tends to prevent it sticking to the skin. The marginal edge of the linen is folded inwards over the mass of the poultice. The surface which is to come next to the patient's skin may be covered with soft gauze or muslin, or applied without such preparation, according to the state of the skin.

Be careful not to put the poultice on too hot, especially when a patient is delirious or insensible. Generally it is a good plan to cover the poultice, after it is applied, with flannel or cotton wool to retain the heat. When a poultice is taken off, and is not to be repeated, the nurse should immediately place a piece of *dry* and *warm* cotton wool of the same size over the part. If this be done it is unnecessary to wipe the tender skin which has been covered with the poultice, except to remove any particles which may adhere.

It may here be mentioned that dry heat, applied by means of hot dry flannels or hot bran bags, will frequently

relieve pain.

Medicines.—It is well to keep all medicines in a safe place where they cannot be damaged by heat, light, or the breakage of containers, and where there is no risk of unauthorized additions being made to them. Special care should be taken with the storage of poisonous preparations, such as, for instance, many 'Soloid' brand products. They should always be kept under lock and key.

The nurse must always read the physician's directions very carefully before administering medicine, and, while in charge of a case, must not depute this important work to others. The bottle should be kept in a cool place and tightly corked. This rule is important because the medicine may contain volatile drugs or those liable to decomposition. Whenever there is the least sediment, the nurse must shake the bottle thoroughly so that all undissolved matter may be evenly distributed. If the sediment persistently adhere to the bottom of the bottle, the bottle should be turned upside down when shaking. The medicine must not be poured out and left for some time in an open glass. In order to ensure an accurate dose being given, a properly graduated measure-glass is to be employed—spoons cannot be depended upon.

If the dosage be ordered in spoonfuls it is convenient to know that a domestic teaspoon is reputed to hold about one fluid drachm, a dessertspoon between two and three fluid drachms, and a tablespoon about four drachms, or half-anounce. Wine-glasses vary much in size, the limits being about two to four ounces. All these measures are only approximate, however, as domestic teaspoons sometimes hold less than one drachm and occasionally as much as three. In the same way, drops from the lip of a bottle should be avoided where practicable, as they vary within wide limits. With the concurrence of the physician, doses in drops should be measured by means of a minim measure.

To ensure accuracy of dosage and reliable therapeutic action, as well as great convenience, 'Tabloid' brand products are extensively prescribed by medical men. Carefully guard against the substitution of imitations.

When 'Tabloid' products are ordered to be taken whole, they should be swallowed with a sip of water. In some cases a better effect is produced by powdering the product, and either mixing it with, or dissolving it in, water, whilst in others the continuous action as it slowly dissolves in the mouth is best suited to the needs of the case.

The Use of the Clinical Thermometer.—When using a clinical thermometer, the nurse must first make sure that the mercury has been shaken down well below the "normal" mark (98.4° F.). In non-registering thermometers this is of course not so necessary, but it is a good rule always to look at the index immediately before using the instrument. Many a patient with a normal temperature has been reported as highly feverish through the neglect of this precaution. When the temperature is taken in the armpit, the nurse must be sure that the skin is perfectly dry, that no clothing is interposed between it and the thermometer, and that the

patient is properly covered up so soon as the instrument is in position.

If the patient have been sitting up, or have been partly uncovered immediately beforehand, it is best to allow five minutes before taking the reading. More sensitive thermometers are also made which will register in one minute or even less, and the time necessary is usually indicated on the back. The time indicated as requisite should in practice be exceeded, whenever possible. If no time be stated, it is safer to assume that the thermometer requires five minutes to register correctly. It is false economy to use cheap clinical thermometers, especially those of foreign manufacture. If a thermometer be employed for many patients, it should be very thoroughly cleansed after each use. If an antiseptic be employed for the purpose, all traces of the antiseptic should be subsequently removed with water. A thermometer should never be washed in hot water.

When a thermometer is inserted into the mouth, the bulb which contains the mercury should be placed beneath the tongue rather to one side, so that it rests about opposite the middle molar tooth. The patient must keep his mouth shut and breathe through his nose, otherwise the passage of cold air through the mouth will prove a source of error. When dealing with a child or a novice, it is well to caution the patient against biting the thermometer. It is often necessary for a nurse to busy herself about other matters while a temperature is being taken, but she should never forget about patient and thermometer until her attention is called to the matter at some subsequent period! It is customary in some hospitals to take the temperature of small children in the rectum. Unless this method be specially ordered by the medical attendant, it should never be used in private practice. The obvious difficulties in obtaining the temperature of restless young children can easily be met by placing the thermometer in the fold of the groin and flexing the thigh upon the body.

The Nursing of Children.—The nursing of children requires the greatest patience and vigilance. Their condition, especially in febrile states, changes much more rapidly than that of adults; hence they must be watched with the greatest care. They are specially liable to delirious attacks, fits and convulsions. Habits of cleanliness should be inculcated from the first. Old and dirty toys must be avoided.

In cases of diarrhoea in young children, and in the absence of the medical attendant, it is usually safe to give a dose of castor oil at once. In hot weather such cases, if neglected, soon assume a serious aspect. An attack of summer diarrhoea must always be reported to the medical attendant at the earliest possible moment.

Unless constantly watched, washed and otherwise cared for, weakly and strumous children with joint affections are liable to serious bed sores.

'Hazeline' Cream will be found useful for application to the skin of infants when the diapers are changed. When this is done, the chance of redness and irritation of the baby's skin from contact with the evacuations is greatly lessened.

Night Duties.—When taking night duty in a private house, the nurse should always have in readiness coal or other fuel in paper parcels. The presence of the paper prevents noise, and enables each packet to be handled in a cleanly manner. If the nurse be provided with a pair of housemaid's gloves, the paper is, of course, unnecessary. It is a good plan to use a stick to poke the fire, as it makes much less noise than a metal poker. Unless there be some special reason for a continued high temperature, the room should be allowed to become at least five degrees cooler at night than in the daytime. This conforms to a law of nature to which living creatures all the world over have become adapted.

In preference to an easy chair the nurse should choose a straight-backed one to sit in. It will help her to keep awake during the night (at times a matter of extreme difficulty), and will contribute to sleep at the proper time.

Conduct.—The nurse must cease talking to an invalid the moment he shows any sign of being fatigued, and must insist on others strictly observing this rule. A good nurse will bring into the service of her profession all her womanly tact, quickness of perception and sympathetic intuition as to her patient's wishes. If an invalid be irritable she does not argue with him, or else she lets him have the better of the argument and the last word. The nurse must never whisper or discuss the case in the patient's presence, nor just outside the bedroom door. If some rule or proceeding which has been adopted prove specially irksome to the patient, the nurse should appeal to the doctor in the patient's hearing to have it altered if possible.

General Hints.—In changing a patient's night clothing, the nurse must take care that the clean articles are not only thoroughly dry but warm. She should never neglect to apologize for giving even necessary discomfort or inconvenience, either to the patient or his friends.

Hot water bottles should invariably be enclosed in properly adjusted and well-fitting flannel covers.

Unless special orders have been given as to warmth, the temperature of a sick-room is to be kept at about 60° Fahrenheit (15.5°C.).

If any visitor call, the nurse must endeavour, with all possible courtesy and tact, so to arrange the interview that her patient may not suffer. She should always place a chair in such a position as to enable the visitor to sit within easy range of the patient, and facing him.

Operations.—A few words respecting the nurse's duties in the operating room will not be out of place. It is well known to every nurse that cleanliness and surgical cleanliness are two very different conditions. It is not sufficient that all appliances should be free from foreign matter perceptible to the eye, or that they be spotless and shining, but they must be absolutely free from infectious organisms, and must be kept so from the beginning to the end of the operation.

In every detail of preparation of her own person and all surroundings, it must be continually borne in mind that nothing should be brought near the scene of operation which has not been rendered perfectly aseptic.

Only immaculate clothing, caps, and aprons may be worn in the operating room. Before touching sponges, instruments, or dressings, the nails, hands and arms, as high as the elbow, must first be rendered as nearly as possible aseptic. The directions given under the heading of Personal Cleanliness, in the article on the Rules of the Central Midwives' Board, on page 143, should be carefully followed.

The care of the instruments, sponges and dressings sometimes falls to the nurse, but in large hospitals the housesurgeon or instrument clerk generally takes this responsibility. In any case, it is well for the nurse to acquire familiarity with the names of the instruments, in order to be able, if called upon, to hand them to the operator without hesitation. One of the best solutions for sterilising instruments, and one which does not corrode them when plated, is made by dissolving one 'Soloid' Mercuric Potassium Iodide, gr. 8.75, in a quart of water. This solution should be kept ready in a vessel into which the instruments may be conveniently dipped.

The care of the operating table also devolves on the nurse. She must see that the mackintosh sheet and plenty of pillows and dry warm blankets are ready. In hospitals where the surgeon uses sponges, great care must be taken to render them perfectly aseptic. Many operators prefer aseptic gauze or wool. Pleated Compressed Sterilised Gauze, and Wool, 'Tabloid' Brand, meet all requirements. Sponges should be well squeezed before being handed to the surgeon. If one fall on the floor or into the saw-dust box, it must be put away at once.

The antiseptic solutions now used in operations are generally of carbolic acid, corrosive sublimate (mercury perchloride) or boric acid. These are most conveniently and readily prepared by means of 'Soloid' brand products which have many important advantages. 'Soloid' Carbolic Acid is supplied of various weights, viz., gr. 5, gr. 20 and gr. 60, and a solution of the required strength may be simply made by dissolving one in a certain quantity of water 'Soloid' Corrosive Sublimate is supplied in each of the following weights: gr. I·75; gr. 8·75; gr. I7·5; ½ gramme and I gramme. One of either strength dissolved respectively in four ounces, one pint, one quart, 500 c.c. or 1000 c.c. of water forms a solution of I in 1000. If wet dressings be employed, gauze, bandages and other materials for dressings are rendered sterile by being soaked in the required solution. Those who are continually occupied with antiseptic solutions should regularly use 'Hazeline' Cream to prevent or remove the roughness of the skin which such solutions are liable to induce.

When the nurse enters the operating room her business is to wait on the surgeon, to keep out of the way, and to watch every instant to see that nothing is handed to him which has touched any doubtful surface. Should sponges be used, a second nurse should wash them, first in plain water, to rinse out the blood, then in warm antiseptic solution. Finally they should be dipped in hot antiseptic solution, and squeezed as dry as possible before they are handed to the surgeon.

Another very important detail to remember is to count the sponges. This should be done carefully before the

operation begins, and a written note of their number should be made. The nurse should not trust to memory. Neglect of this precaution has caused more than one death. Every one must be accounted for, and if any be missing, the surgeon should be notified before the wound is closed.

The operation having been completed, and the dressings, which must be sterile beyond suspicion, having been applied,\* the patient should be removed and placed in bed. Hot water bottles, well protected, must be in readiness, and stimulants at hand.

Such, briefly, are the duties of the nurse in the operating theatre, where the assistance she may render is both material and important.

'Tabloid' Brand Products.—'Tabloid' brand products are largely prescribed by the medical profession. The nurse should bear in mind that the word 'Tabloid' is a brand which indicates the preparations of Burroughs Wellcome & Co., and to ensure the supply of reliable drugs the word 'Tabloid' should always be specified when ordering. As there are inferior imitations, the nurse should, by careful inspection, assure herself that the genuine 'Tabloid' products are supplied. By doing this, and so guarding her patient against the substitution of inferior products, the nurse will render him a great service, and will have the satisfaction of knowing that by her care and alertness she has secured for him preparations containing drugs of undoubted purity and reliable therapeutic activity. Should substitutes be dispensed they should be refused, returned, and complaint of the imposition made to the physician.

Many patients can easily take 'Tabloid' brand preparations when other medicines produce unconquerable feelings of aversion. This is especially so with nauseous or unpleasant drugs, 'Tabloid' products of which are coated with a readily soluble film of pure white sugar. They are easy to swallow, and their appearance and taste make them acceptable even to children or the most fastidious patients.

By using 'Tabloid' products the trouble of weighing or measuring is avoided, accuracy of dosage is assured, and the danger of over-dosage is reduced to a minimum. These

<sup>\*</sup> To ensure asepsis, Pleated, Compressed, Sterilised Surgical Dressings, 'Tabloid' Brand, should always be employed.

advantages the physician and the nurse appreciate, especially when medicines have to be administered during the night, or when the room is darkened.

In some cases the physician may give directions that the 'Tabloid' products are to be dissolved in water before being taken, but in all cases in which they are swallowed intact they should be administered with a sip of water. The prescriber may instruct the nurse to powder some varieties of 'Tabloid' drugs before administration. This may be done very conveniently in a fold of writing paper on a table. A smart tap with the handle of a knife will disintegrate the product, and all small particles may be powdered by rubbing the knife handle over the fold.

'Tabloid' products intended for constitutional effect, such as quinine, antipyrine and caffeine compound, are so prepared that they rapidly disintegrate or quickly dissolve. Those prescribed for local effect, such as potassium chlorate and ammonium chloride, are prepared of a consistency that allows of slow solution in the mouth; prolonged and continuous suffusion of the mucous surface of the mouth and throat with the remedial agent is thus assured.

Serums ('Wellcome').—Serums being generally required urgently, and it being often undesirable to make mention of the illness in a telegraphic message, Burroughs Wellcome & Co. have adopted a special code relating to the 'Wellcome' Serums, produced in the Wellcome Physiological Research Laboratories, for which they act as distributing agents. This code is incorporated in the General Price List of Burroughs Wellcome & Co.'s Fine Products, a copy of which is supplied to every chemist. The nurse can therefore readily obtain full details of the code when such may be required by the medical man.

Arrangements are made at the London Offices for the immediate despatch of telegraphic orders for serums received between the hours of 9 a.m. and 10 p.m. on week-days, and between 3 and 4.30 p.m. on Sundays and Bank Holidays.

'Soloid' Brand Products.—In order to minimize the risk of error, Burroughs Wellcome & Co. manufacture certain chemical products, which are not intended for internal

administration, of a distinctive and easily recognized shape. For example, the shape here drawn is strictly adhered to in those products issued under the 'Soloid' brand which are intended for the preparation of solutions for antiseptic, anæsthetic, astringent, testing and microscopic staining purposes.

In the case of 'Soloid' products containing potent poisons, a further safeguard is provided by the addition of a harmless artificial colouring, which is communicated to the fluid in

which the product is dissolved.

Mineral Waters.—The great value attributed by physicians to a course of mineral water treatment in certain diseases is well known to every nurse. This treatment had formerly to be carried out either by using the bottled waters which are imported into this country from the original spas, or by sending the patients to the springs in order to take the waters at their sources. The former method has the great disadvantage that from the time the water is bottled to the time it reaches the patient, many months, in some cases even years, may have elapsed; thus the water may be stale, and indeed may have undergone chemical changes. In visiting the various spas patients have perforce to take long, tedious and expensive journeys, the strain of which many delicate persons are quite unable to bear.

which many delicate persons are quite unable to bear.

The introduction of 'Tabloid' brand mineral waters has obviated these disadvantages of, and obstacles to, mineral water treatment. They contain, in a most compact and unimpaired condition, the essential constituents of the natural waters, and the patient is thus enabled to convert a glass of ordinary water into a fresh draught of effervescing mineral water, which equals that of the natural spring in therapeutic activity. A continuous course of mineral water treatment is thus rendered possible in the patient's home, or wherever he may be, without any difficulty. By dissolving one 'Tabloid' product in a stated quantity of water, the draught is prepared specially each time it is required; it is therefore fresh, and, being sparkling or effervescent, the water is

rendered more agreeable.

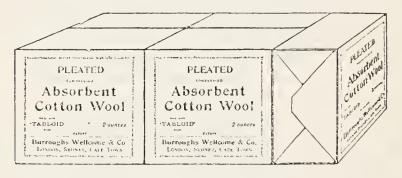
With 'Tabloid' products, the therapeutic action of Carlsbad, Kissingen, Vichy, Seltzer waters, etc., may be obtained in any country. The portability and compactness of the 'Tabloid' Brand Mineral Water Salts render them specially suitable for those travelling in distant parts of the world.

### TRADE 'TABLOID' BRAND

#### PLEATED COMPRESSED

### BANDAGES AND DRESSINGS

Pleated Compressed Bandages and Dressings were originally introduced by Burroughs Wellcome & Co. 'Tabloid' Bandages and Dressings are made of materials of the best quality and are unique in compactness and portability. Although occupying a minimum of space they can be unfolded as easily as the ordinary bulky kinds.



This diagram is one-third the size of one 2 oz. packet of ordinary absorbent cotton wool. As shown, it takes FIVE 2 oz. packets of 'Tabloid' Absorbent Wool to occupy the same space.

### STERILISED DRESSINGS

A further important advance originated by B. W. & Co. is the issue of 'Tabloid' Dressings and Bandages—sterilised. Each dressing so issued is carefully sterilised and enclosed automatically in a sterile impervious covering.

For list see page 75

### FIRST AID IN EMERGENCIES

General Directions.—It often happens that a nurse, especially when engaged in private or district work, is appealed to for help in some emergency before medical aid can be procured. A few general directions as to what to do and what not to do in the commoner accidents and emergencies, may therefore prove useful.

These directions are of the simplest and most practical character, for experience has shown that at such times detailed theoretical knowledge—such as is acquired in the earlier months of training—is very liable to prove untrustworthy. For instance, a nurse has been known to spend invaluable time in trying to localize the anatomical spot where the brachial artery can be compressed digitally against the bone, instead of at once adopting the efficient commonsense method of controlling hæmorrhage by twisting a handkerchief or a cord as tightly as possible round the upper arm. Any grave error, whether of omission or commission —and especially one of the latter kind—is likely to bring the nurse and her profession into disrepute. Anything like officious interference with matters which ought to be left to the medical man should be scrupulously avoided. Any reputation for "cleverness" so gained with the public is more than counterbalanced by the serious nature of the risk, and by the righteous disapproval of the medical attendant. In the succeeding paragraphs, however, it is shown that in not a few emergency cases prompt and vigorous measures always tempered with caution and common-sense—may prove invaluable.

Simple Fractures.—If called to a case where a bone is supposed to be broken, the nurse should make careful observation of the patient and of the injured limb before doing anything else. It is bad economy to spare clothing on such an occasion. A sleeve or trouser leg should be opened up at the seam from end to end without disturbing the injured limb. Many a simple fracture has been made compound, and many a compound fracture has been made septic, through neglect of these measures.

A good view of the seat of injury having been obtained there should be no interference unless the case seem urgent.

It is the duty of the surgeon to form a diagnosis as to whether the bone be broken.

If the limb be unnaturally bent or distorted, however, and especially if the broken ends of the bone project against the skin, the nurse should gently and slowly replace the limb in its normal position. Should it be necessary to move the patient at once, a temporary splint must be applied. For this purpose a piece of common millboard such as is used in making drapers' boxes, serves excellently. It should be bent in parallel creases, so as to enclose the limb, and *firmly* bound at the ends and middle with handkerchiefs. A stiff folded newspaper will make a very fair substitute, or even a pillow may be bound round the limb. The nurse must never fail to take personal charge of the fractured limb while the patient is being carried, and to keep it as steady and straight as possible.

Compound Fractures.—When there is a communication between the broken surfaces of the bone and the outer air (usually caused by a sharp fragment of the bone penetrating the skin), the fracture is called compound, and is a much more serious injury than one in which the skin remains intact. This is owing to the fact that septic germs may obtain an entrance into the wound. If these micro-organisms can be destroyed, or, better still, if their entrance can be prevented, the patient's condition is very greatly improved.

[The following remarks regarding the treatment of compound fractures must not be construed into an authorization to nurses to deal with such matters. A nurse would incur grave responsibility if she meddled with a compound fracture when there was any possibility of obtaining medical assistance within a reasonable time. This book, however, is read by nurses in every part of the world, and the following information is addressed principally to those whose duties are discharged in distant colonial settlements and in missionary stations far from medical aid.]

Whenever possible, the wound should at once be washed and thoroughly syringed out with an antiseptic lotion, such as carbolic acid solution (I in 40) or corrosive sublimate solution (I in 1000), and covered with a suitable dressing.

For quickly preparing these solutions, 'Soloid' Brand Carbolic Acid and 'Soloid' Brand Corrosive Sublimate (Mercuric Chloride) are most convenient. 'Soloid' Corrosive

Sublimate containing 8\frac{3}{4} grains of the chemical, when dissolved in a pint of water, forms a I in 1000 solution. Carbolic acid solutions of desired strengths may be easily made if it is remembered that two ounces of water weigh 875 grains, and that 'Soloid' Carbolic Acid, gr. 20, dissolved in that quantity of water makes a solution approximating to I in 40. 'Soloid' Carbolic Acid, gr. 60, is intended for the preparation of larger quantities of solution.

A temporary dressing may be made by using a clean and newly-ironed handkerchief, quickly refolded so as to bring an inner surface in contact with the wound. It is practically aseptic, and has the merit of being readily obtainable. If a projecting end of a bone cannot be replaced, it should be swabbed thoroughly with the lotion, and completely covered with the handkerchief soaked in the antiseptic solution. Make-shift splints should be applied as to a simple fracture. A splint, to be efficient, must be firmly bound to the limb, and be long enough to embrace the articular enlargements (joints) at both ends of the broken bone.

In fractures of the thigh it is useless to apply such a splint as is mentioned above. The limb should be laid on its outer side with a support under the knee. Gentle but firm and straight traction at the knee will greatly help the patient, should it be necessary to move him before a surgeon arrives.

Dislocation of a joint is accompanied by considerable pain, and, as reduction should be entrusted only to a medical man, the nurse's first duty is to send for him. There should be no delay, for with the lapse of time difficulty of reduction increases. The following are some of the signs by which a dislocation may be recognized; but it must be remembered that a dislocation may be either partial or complete, and that it may be complicated with a fracture or with other severe injury of the surrounding parts: (I) pain at the seat of injury; (2) difficulty of movement; (3) change in the actual shape of the joint; (4) alteration in the length of the limb.

Dislocations of the shoulder are most frequently met with, the head of the humerus being liable to displacement in different directions. After having sent for the medical attendant, the nurse may be able to lessen the pain by applying hot fomentations, and by supporting the limb with carefully arranged pillows. A form of displacement which is very trying to the patient is dislocation of the jaw. As

reduction does not present any great difficulty it may be as well for the nurse to be acquainted with the method. The operator's thumbs, protected by a napkin, are placed on the lower molar teeth; pressure is then made downwards and backwards, the chin at the same time being elevated by the fingers. By these movements the jaw may be made to slip in place with a snap, and care is necessary to avoid being bitten. After any dislocation there may be weakness in the joint and a tendency for the displacement to recur. It is necessary therefore for the injured parts to be kept firmly in position until strength has been regained.

Sprains most frequently occur at the wrist and at the ankle, and the treatment necessary in each case will depend upon circumstances, the most important consideration being the degree of severity and the age of the lesion. As much care is necessary in the management of sprains as in the treatment of apparently more serious injuries. On no account should a sprain be neglected, as permanent disablement may follow carelessness in this respect, and the injury may cause long-abiding discomfort, stiffness and disability,

even when every possible care has been taken.

Complete rest is absolutely necessary if the sprain be more than of the most trifling nature. The actual length of time necessary for a patient to rest will, of course, be indicated by the medical attendant; but before receiving any instructions the nurse should keep the limb at rest. A severe recent sprain should be treated by first placing the limb upon a pillow in the position most comfortable to the patient. Generally speaking, cold applications are most beneficial. For this purpose a little 'Hazeline,' either alone, or mixed with an equal quantity of cold water, should be used to saturate strips of lint which may be applied to the affected part, and frequently renewed. In some cases, when the pain is exceptionally severe, hot applications give relief, and medical men frequently prescribe the combination of lead and opium in a lotion. For the immediate preparation of such an application, 'Soloid' Lead and Opium Lotion is most convenient. One 'Soloid' product is added to each fluid ounce of hot water and shaken up until disintegration occurs, when the lotion is ready for use. After the swelling has subsided, and when the patient can bear it, gentle pressure is applied, by means of a bandage, to assist the absorption of fluid. Following this, gentle massage, with passive movement

of the joint, is employed; and finally, the joint must be judiciously exercised by the patient himself.

Wounds.—HÆMORRHAGE.—The chief points to be aimed at in rendering first aid in the case of incised wounds are: - Ist, to arrest hæmorrhage, and, 2nd, to prevent septic contamination. The best and safest way of arresting arterial bleeding temporarily in a limb or extremity is to bind an elastic tourniquet firmly about the limb above the seat of injury, i.e., between the wound and the heart. piece of rubber tubing will answer the purpose if it be flexible and strong enough to be tied securely. In one case of a punctured wound of the great artery at the back of the knee a piece of tubing, hastily snatched from a common gas-ring and wound round the middle of the thigh, saved the patient's life. If such an appliance cannot be obtained, any piece of strong cord wound repeatedly round a limb in such a way that the coils are superimposed will generally suffice. Needless to say, any such severely constricting agent must be removed at the earliest possible moment.

Where such means are not sufficient or available, firm direct pressure, if properly applied, will generally stop the bleeding, and is a safer method of treatment. By far the most efficient way of applying this method is to uncover completely the bleeding point, and to apply pressure with the fingers over a pad of clean linen. Before doing this, however, the nurse must not fail to wash and otherwise disinfect her hands as thoroughly as the urgency of the case allows.

It is a good plan invariably to raise the wounded limb well above the body, and to place beneath it a firm support such as a large hassock, folded coat or other available substitute.

The treatment of secondary and recurrent hæmorrhage after operations need scarcely be dealt with here, but the principles involved are the same.

A clean wound which does not bleed should be meddled with no more than is necessary until the surgeon comes.

Wounds.—ANTISEPSIS.—In any case where antiseptic measures may be needful, the nurse should not, as a preliminary, apply strapping plaster or any sticky application, since its removal would disturb the wound. A good plan in such a case is to dust the skin about the wound with iodoform, gently to place the edges of the cut in apposition, and to cover the wound with any clean and light dressing.

Any worrying of the cut surfaces will interfere with healing by first intention.

For simple cuts there is no better treatment than a piece of lint saturated with 'Hazeline,' over which is placed a layer of dry lint, the whole being strapped down with adhesive plaster.

'Phenofax,' an antiseptic, emollient and healing preparation containing 7 per cent. of pure carbolic acid (phenol), also makes an excellent dressing.

Any severe wound, or one which is contused, lacerated, or dirty, should be well douched as soon as possible with an antiseptic solution,—such as a I in 1000 solution of corrosive sublimate, made by dissolving 'Soloid' Corrosive Sublimate (Mercuric Chloride), gr. 8.75, in a pint of warm water,—and covered with two or three layers of 'Tabloid' Sal Alembroth Gauze.

Wounds.—STITCHES.—Cases occur, especially in the Colonies, where a doctor cannot be obtained, perhaps for several hours. In such an event it is well for the nurse to know how to put in a stitch. She should use silver wire or carbolised catgut, and a triangular needle, and should boil both before using. The hands must be thoroughly cleansed with the corrosive sublimate solution mentioned in the previous paragraph. The needle should be made to enter the skin vertically. The stitch must on no account be drawn tighter than is necessary to bring the cut surfaces into contact. It is almost needless to add that a nurse should never undertake surgical duties except in emergencies, or by express direction of the doctor. This golden rule cannot be too strongly insisted upon.

Burns and Scalds.—If called upon to give aid in case of a severe burn or scald, the nurse should aim to protect the injured skin from the air, and to fortify the patient against shock. The application to the injured part of linen dipped in a solution of one ounce of sodium bicarbonate in rather more than half a pint of water usually gives relief.

Any kind of pure oil or grease of a non-irritating character, spread liberally on lint, clean linen, or calico rag, will serve to protect the skin in an emergency; and it is a mistake to waste a moment in making carron oil or other application which takes time to prepare, when lard or oil is within reach. The best dressing is 'Borofax,' which

prevents sepsis, relieves pain, soothes the part and stimulates

healing.

If the washing and re-dressing of a burn be left to the discretion of the nurse, she will find that the addition of a little common salt to the water (just enough to be perceptible to the sense of taste), or of bicarbonate of soda, will save the patient much pain and smarting.

In a case of extensive burns or scalds a medical man will sometimes advise the immersion of the whole body, with the exception of the head, for a considerable time in a warm

bath, at a stated temperature.

Shock from Burns.—Burns usually cause a considerable shock to the nervous system, and it is most important to keep the feet and abdomen of the patient warm with hot bricks or water bottles covered with flannel, care being taken to prevent further injury to the patient from too close contact with the hot material. Seeing that the collapsed condition is a temporary one, and, when arising from such a cause, is plainly not associated with hæmorrhage (see Syncope, page 60), the nurse will generally be quite justified in giving hot coffee or other stimulant to revive the action of the heart.

Foreign Bodies in Eye, Ear or Throat.—Small foreign bodies in the eye can, when loose, generally be removed with the corner of a handkerchief. If, however, they are attached to the conjunctiva, as is often the case when a minute cinder gets into the eye on a railway journey, a piece of soft wood, such as a lucifer match carefully smoothed, will generally effect the desired result. A new and clean camel-hair pencil, moistened by dipping in water, is the best instrument for the purpose.

Frequently a particle of grit, etc., will become attached to the inside of the upper lid, in which case it can be readily removed by gently and carefully turning the lid back over a thin pencil or penholder, and wiping off the

particle with the corner of a handkerchief.

As a rule, it is best for a nurse to make no attempt to extract a foreign body, such as a bead, pea or pebble, from a child's ear. The attempt may involve the patient in considerable danger, and will probably prove unsuccessful. Indeed, few surgeons of experience will try to remove a foreign body from a child's ear without the aid of an anæsthetic.

Children sometimes put such objects as buttons, cherry

stones or pebbles into their nostrils. These obstructions are often easy to remove. The child must first take a deep breath, and the nurse must then shut the child's mouth, and at the same time close the nostril on the opposite side. The child is then directed to blow violently down the obstructed nostril. If this do not expel the offending substance, it may be removed by pressure from above downwards on the outside of the nostril. Anything fixed in the bony nasal passage requires the assistance of surgical skill.

Foreign bodies such as coins and large buttons sometimes get lodged in the pharynx, and produce alarming symptoms. In many cases a finger thrust boldly on one side of the pharynx will pass beneath the foreign body and extract it. Another good plan is to hold the child head downwards and to shake and slap him thoroughly. In this way not a few lives have been saved when suffocation was imminent.

Artificial Respiration.—For general purposes, the most satisfactory method of producing artificial respiration is Sylvester's. It should be employed in attempts to restore animation in newly-born children (see also page 149). The patient should be laid on his back, with a cushion or folded blanket under the shoulder blades. The operator, who is behind the patient's head, should take hold of the wrists, press the arms firmly against the ribs, then raise the arms to the fullest extent above the patient's head, and finally bring the arms down again to the patient's ribs. These manipulations should be repeated at the rate of about fifteen times a minute, not more. It is a mistake, and an exceedingly common one, to attempt greater rapidity of movement.

Syncope.—A word of advice as to fainting fits has been abundantly justified by experience. Before giving alcohol or any other heart stimulant, the nurse must be quite sure that the patient is not suffering from the effects of hæmorrhage. She must remember that a fainting fit is often nature's way of staying the flow of blood until clots can form in the bleeding vessels. In cases of uterine hæmorrhage accompanied by syncope, it is obviously the greatest mistake to stimulate the flagging circulation by artificial means. Impending faintness may usually be prevented by lowering the patient's head, so that the blood may the more easily pass to the brain. If a person fall in a faint, it is better to

let him remain lying down. The first action of over-zealous friends is to lift up a fainting person. It is, in effect, the act of an enemy.

Coma.—It is well for a nurse to be able to form an opinion as to the cause of unconsciousness from which a patient may be suffering, and a few indications are here given of the general distinguishing features. This information is only intended to enable the nurse to render first aid until the arrival of a doctor.

Other forms of coma than those specified below may be met with, such for example as that which usually follows an epileptic seizure. The nurse should loosen the clothing, ensure fresh air, apply warmth to the extremities, if necessary, and carefully watch the patient until the arrival of a doctor. In the case of an epileptic fit, it is not necessary to restrain the convulsive movements of the affected limbs. A glove-finger, lead pencil, or piece of wood should be placed between the teeth to lessen the chance of the tongue being bitten; and the patient should be guarded from infliction of any form of injury.

APOPLEXY.—Convulsions are rarely present. The pupils are often unequally dilated, and there may be facial paralysis. The conjunctiva is not sensitive to the touch, the respiration is stertorous and the pulse is generally full. The patient cannot be roused. Do not move the patient more than may be necessary, but loosen the clothes and raise the head. Cold applications should be used to the head, and warmth applied to the feet until the doctor's instructions are received.

ALCOHOLIC INTOXICATION.—It is often difficult to distinguish this from apoplexy, especially in cases where an apoplectic patient has recently taken liquor. The pupils are, however, in intoxicated persons, usually equally dilated, the conjunctiva is sensitive to the touch, and the respiration is either normal or approaches snoring in character. It is possible to rouse him temporarily. It should be remembered that if, while in a semi-comatose condition, a patient should vomit, he may not be able to clear his mouth of the contents, and that there is a danger of food falling into the larynx. The clothes should be loosened, the patient placed upon his side with the head raised, and due attention paid to keeping the mouth clear of obstructions.

URÆMIA.—A comatose condition may also be caused by uræmia. A patient thus affected may exhibit the

following symptoms. The face is usually pale, the pupils normal or dilated, the conjunctiva generally sensitive, the pulse slow. A sighing or hissing sound frequently accompanies each expiration. The patient cannot be roused, but the coma often alternates with convulsions. The condition is serious, and the services of a medical man must be obtained without delay.

OPIUM POISONING.—Cases of poisoning by opium, or by its chief alkaloid, morphine, are not infrequent, owing to the extent to which these drugs are employed for the relief of pain. There is a danger of confusing opium poisoning with apoplexy, or with alcoholic intoxication. The most reliable indication, however, is the contracted state of the pupils; this is equal and generally extreme. The pulse and the respiration are both slow. Although apparently unconscious, the patient may be roused if vigorous measures be taken. Until the arrival of the doctor, vomiting should be encouraged, and hot, strong coffee may be given if the patient can swallow, or one 'Soloid' Potassium Permanganate, gr. 5, dissolved in half a tumblerful of water. (See also page 65)

# WEIGHTS AND MEASURES Apothecaries Weight

20 grains	ı scruple (9i)
3 scruples	ı drachm (3i)=60 grains
8 drachms	i ounce $(3i) = 480$ grains
12 ounces	i pound = 5760 grains

NOTE.—The ounce and pound are respectively identical in the Apothecaries and Troy scales, but they differ from those of the Avoirdupois standard.

## Avoirdupois Weight

(Adopted by the British Pharmacopæia)

437·5 grains..... 1 oz. 16 ozs...... 1 lb.=7000 grains

### Imperial Measure

(Adopted by the British Pharmacopæia)

20 fluid ounces ...... 1 pint 8 pints..... 1 gallon

A domestic teaspoon is reputed to hold about one fluid drachm; a dessertspoon between two or three fluid drachms; a tablespoon about half an ounce; a wineglass about two ounces. No reliance can be placed upon such measures, which are never scientifically accurate.

Teaspoons sometimes hold as much as three fluid drachms and sometimes as little as one, and, like drops and other indefinite quantities, should be avoided when possible. When accurate and uniform dosage is required, 'Tabloid' products should be employed.

# Metric Weights and Measures

Those more generally employed are:

I gramme.....

1 gramme...... 15.432 grains 1 kilogramme (kilo) ....... 2 lb., 3 oz., 120 grains

1 cubic centimetre (c.c.) ... 16.9 minims

ı litre\* ..... ı pint, 15 oz., ı dr., 43 minims

ı metre..... 39.37 inches

\* For all practical purposes, the litre may be taken as equivalent to 1000 cubic centimetres.

### MEDICAL BATHS IN COMMON USE

- 1. The hot bath. Temperature from 98° F. to 106° F. (36.7° to 41.1° C.). N.B.—The cold water should be placed in the bath first, and the hot water added until the thermometer registers the required temperature.
- 2. The 36·7° C.). The warm bath. Temperature from 92° F. to 98° F. (33.3° to
  - The tepid bath, 85° F. to 92° F. (29.4° to 33.3° C.).
- 4. The cold bath, 33° F. to 65° F. (0.6° to 18.3° C.). Broadly defined, a cold bath means a bath at a temperature incidental to the time and place, without any hot water being added. It may be otherwise expressed as water at 65° F. (18.3° C.), or reduced by gradual addition of ice to 40° F. (4.4° C.) or below.
- 5. The alkaline bath. Add a quarter of an ounce of sodium carbonate (washing soda) to each gallon of water.
- 6. The bran bath. Take two ounces of bran for each gallon of water. Mix the bran with a small quantity of boiling water, and add it to the water in the bath.
- 7. The sulphur bath. Add a quarter of an ounce of potassa sulphurata to each gallon of water.
- The mustard bath. One half to one ounce of mustard to each gallon of water—the water as hot as can be borne.
- 9. The vapour bath. Temperature from 90° F. to 140° F. (32·2° to 60° C.). A vapour bath may be improvised by placing in the bed a few 'stone' ginger-beer bottles, filled with nearly boiling water, tightly corked down, and wrapped round with pieces of flannel wrung out of hot water. They should be placed in the bed round about the patient, who should be well covered up.
- 10. The Turkish bath. Temperature ranges from about 90° F. (32.2° C.) in the cooler rooms to 230° F. (110° C.), or even higher, in the hottest room. No one should take Turkish baths without being examined and professionally advised to do so.

# "'HAZELINE' SNOW" (Trade Mark)

"'HAZELINE' SNOW" is unique as a preparation for



New packing Greatly reduced

the skin. It is entirely free from greasiness, and is therefore particularly appreciated by patients and nurses who find ordinary toilet creams objectionable. It soothes, cools and whitens the skin almost immediately it is applied.

# 'HAZELINE' CREAM (Trade Mark)

Presents 'HAZELINE' in combination with 'DARTRING'

Lanoline. It is cooling, healing and soothing, and is particularly suitable for those whose skins are naturally inclined to be dry. As a dressing for small wounds, cuts and burns, it is admirable.



New packing Greatly reduced

# POISONS and their ANTIDOTES

The treatment of cases of poisoning requires great care and judgment, and calls for the exercise of the utmost discretion. The first thing to be done in a case of suspected poisoning is to send for a medical man. If a medical man be not available the assistance of the nearest chemist should be sought.

Next consider whether an emetic should be given. In the majority of cases this is the correct course to follow. When the poison is an acid or other corrosive agent, however, its action on the membrane of the stomach and the esophagus may have been such as to render the use of an emetic highly dangerous from the liability to perforation. The proper course then is to neutralize the acid or corrosive agent according to the directions in the following table, instead of attempting its removal.

Emetics.—If it be decided to administer an emetic, one or other of the following will be found most useful:—

- 1. Mustard and Water.—A tablespoonful of mustard mixed in a tumblerful of tepid water. The water should be added to the mustard with constant stirring, and the patient compelled to take two or three such draughts until the desired effect be produced.
- 2. Common Salt.—Mix two tablespoonfuls in a tumblerful of tepid water.
- 3. Ipecacuanha.—Give a large tablespoonful of ipecacuanha wine in half a tumblerful of warm water, or give 15 to 30 grains of powdered ipecacuanha mixed with half a tumblerful of warm water. This generally acts promptly, but is liable to increase the depression caused by most poisons.
- 4. Sulphate of Zinc.—From 15 to 30 grains of sulphate of zinc dissolved in half a tumblerful of warm water will be found very effective. Sulphate of zinc does not produce marked after-depression.

If none of the foregoing emetics be available, copious draughts of warm water, and tickling the back of the throat should be tried. If the patient be a child, holding the nose will greatly help the swallowing process.

The use of the stomach tube, or of kindred appliances should be left to the medical man. In some cases of poisoning there is great difficulty in swallowing, and in such circumstances, a hypodermic injection of apomorphine with strychnine ('Tabloid' Hypodermic Apomorphine Hydrochloride, gr.  $\frac{1}{60}$ , known as No. 93, dissolved in ten minims of water) may be given. This, however, lies outside the province of the nurse unless no medical aid be available. Such an injection may be followed by depression.

65

The treatment to follow the emetic (if administered) will require quick, but careful, consideration, and the following table gives the temporary treatment and antidotes for the more common poisons. The antidotes here given are those which are thought to be more generally available, and which may be used pending the arrival of expert assistance.

It is of great importance to ascertain approximately the amount of poison taken, as the quantity of antidote to be administered necessarily varies proportionately. A case has been reported of a patient, who had taken a small quantity of poison, being nearly killed by the ill-judged amount of antidote administered.

Poisons	Antidotes
Nitric Acid Sulphuric Acid (Oil of Vitriol)	Do not give an emetic, or use the stomach tube.  1. Whiting, Whitewash, Chalk, Wall Plaster, or Magnesium Carbonate, mixed with a little water; or Washing Soda, Sodium Bicarbonate, or Potassium Bicarbonate dissolved in plenty of water. Soap and water in large draughts.  2. Repeated drinks of one of the following:—
	<ul> <li>(a) Milk and Egg, (b) Olive Oil, ½ pint, in a pint of water, or (c) Thick Gruel.</li> <li>3. To sustain patient, Predigested Meat or Milk 'Enule' Brand Rectal Suppositories.</li> </ul>
Oxalic Acid Salt of Sorrel	Do not give an emetic, or use the stomach tube.
Salt of Lemons Acetic Acid  2.	<ol> <li>Chalk, Whiting, Wall Plaster, or Whitewash, in a little water, or Lime Water, freely. A full dose of Castor Oil should be given afterwards.</li> <li>Give Milk freely.</li> </ol>
	3. To sustain patient, Predigested Meat or Milk 'Enule' Brand Rectal Suppositories; or, if there be much depression, diluted Brandy per rectum.
Carbolic Acid	<ul> <li>Do not give an emetic.</li> <li>Give as temporary measures until the arrival of the medical man:—</li> <li>Olive Oil or Milk, or White of Egg in water, freely. Keep patient warm.</li> <li>Magnesium Sulphate (Epsom Salt), or Glauber's Salt (½ ounce in ½ pint of warm water), three times, or Lime Water freely.</li> </ul>

#### Poisons

#### Antidotes

Carbolic Acid (continued) Hydrocyanic Acid (Prussic Acid) Cyanides

- 3. If necessary give Stimulants, and employ Artificial Respiration (15 to minute). If patient be not seen *immediately* after the poison is taken, 1, 3, 4, 5 and 6 may be tried.
- 1. Place patient in open air.
- 2. Administer an emetic.
- 3. Cold douche (from height) to head and spine, or dash cold water on continuously.
- 4. Artificial respiration (15 to minute); Ammonia inhalation by the nostrils.
- 5. Dissolve about gr. 15 of Iron Sulphate and about min. 20 of Tincture (or Solution) of Iron Perchloride (or 2 'Tabloid' Ferric Chloride) in a wineglassful of water, then add I to 2 drachms of Magnesia previously made into a thin cream with Mix and administer. Repeat if water. necessary.

ALKALIS-Caustic Potash Caustic Soda Lime Strong Ammonia 6. Stimulants internally.

Do not give an emetic or use stomach tube.

1. Vinegar, freely diluted with water; Lemon Juice in water; Citric or Tartaric Acid  $(\frac{1}{2} \text{ drachm in } \frac{1}{2} \text{ pint of water)}$ , repeated.

2. Afterwards give milk very freely; or Olive Oil (\frac{1}{4} pint in one pint of milk or water); or White of Egg. Repeat.

3. Stimulants internally.

- 1. Emetic (if vomiting have already occurred, encourage it by giving draughts of tepid water).
- 2. Tannic Acid, gr. 30, in warm water, or very strong Tea or Coffee. Repeat as often as vomited.
- 3. When vomiting subsides, give (a) White of Egg in water, or (b) Milk, freely.
- 4. Stimulants. Hot water bottles to extremities.
- 1. Emetic. Complete emptying of the stomach is important.
- 2. Dialysed Iron (Wyeth), one tablespoonful followed by a little Common Salt in a tablespoonful of water; repeat to times. Or Ferric Hydrate, prepared as follows: Dilute oz.  $1\frac{1}{2}$  of Solution (or Tincture) of Iron Perchloride with a wineglassful of water (or dissolve 18 products of 'Soloid' Ferric Chloride in a wineglassful of water) and add to a solution of oz. ½ of Sodium Carbonate (Washing Soda) in about half a tumblerful

METALLIC POISONS— Antimony Compounds Tartar Emetic Butter of Antimony

Arsenic and its preparations. Fowler's solution, etc.

#### Poisons

#### Antidotes

Arsenic and its preparations (continued)

Mercury and its preparations Corrosive Sublimate Red or White Precipitate

Phosphorus Rat Paste Matches

Non-Metallic Poisons—

Aconite
(Monkshood)
Aconitine

Belladonna
(Deadly Night-shade)
Atropine

Opium Morphine Chlorodyne Paregoric Laudanum of water. Mix and administer. (These quantities are stated to render insoluble at least gr. 5 of arsenic). If neither of the foregoing be available, give large quantities of Calcined Magnesia mixed with water to form a thin paste.

3. Milk and Eggs, beaten up, or Olive Oil (\frac{1}{4} pint in one pint of water).

4. Iced Barley Water for thirst.

5. Stimulants. Hot water bottles to extremities.

1. Eggs mixed with Milk or Water, in unlimited quantities; or Flour and Water.

2. Emetic.

3. In continued absence of medical aid, wash out stomach with water having White of Egg dissolved in it.

1. Copper Sulphate, gr. 3 (3 'Soloid' Copper Sulphate, gr. 1), dissolved in water, every five minutes until vomiting is induced, then every fifteen to thirty minutes. Or Zinc Sulphate, gr. 20 (2 'Soloid' Zinc Sulphate, gr. 10), dissolved in oz. 4 of water, may be given as an emetic. After free vomiting:—

2. Old or French Oil of Turpentine, 40 drops in 1 ounce of water every \(\frac{1}{4}\) hour for one hour, then three times a day, Avoid American or German turpentine.

3. Magnesium Sulphate (Epsom Salt), ½ to I ounce in a tumblerful of water.

4. Milk and Eggs. Avoid ordinary fats and oils.

1. Emetic.

- 2. Sal Volatile or Brandy. Lay the patient flat.
- 3. Warmth, Artificial Respiration (15 to minute) and Friction.

1. Emetic.

2. Charcoal, Brandy, Hot Coffee.

- 3. Artificial Respiration (15 to minute) and Warmth.
- 1. Emetic.
- 2. Hot Coffee.
- 3. 'Soloid' Potassium Permanganate, two of gr. 5 strength dissolved in four ounces of water.
- 4. Cold Water to face; rouse patient by Forced Exertion and Flipping.
- 5. Artificial Respiration (15 to minute) and Warmth.

Poisons	Antidotes
Strychnine Nux Vomica Vermin Killer	<ol> <li>Emetic.</li> <li>Tannin, gr. 20 to gr. 40 (8 to 16 'Tabloid' Tannin, gr. 2½), in a wineglassful of water, followed by another Emetic.</li> <li>'Tabloid' Potassium Bromide, six of gr. 5 strength, and 'Tabloid' Chloral Hydrate, three of gr. 5 strength, dissolved together in half a tumblerful of water, and repeated</li> </ol>
m .	if necessary. Chloroform may be required. 4. Quiet, but, in case of collapse, Artificial Respiration (15 to minute).
Turpentine	I. Emetic.
	2. Magnesium Sulphate (Epsom Salt), 1 oz. in half a tumblerful of water.
	3. Draughts of White of Egg and Milk.

# THERMOMETRIC EQUIVALENTS

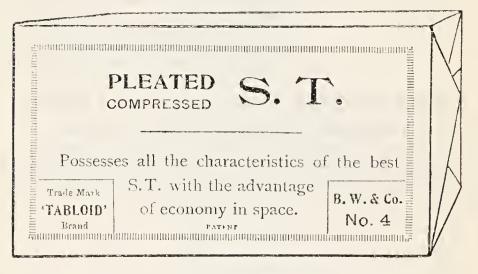
#### Fahrenheit, Centigrade and Réaumur

To convert degrees F. into degrees C., deduct 32, multiply by 5 and divide by 9; to convert degrees C. into degrees F., multiply by 9, divide by 5 and add 32; to convert degrees F. into degrees R., deduct 32, multiply by 4 and divide by 9; to convert degrees R. into degrees F., multiply by 9, divide by 4 and add 32.

-	, <u>-</u>				
F.	c.	R.	F.	c.	R.
212	100	80	88	31.1	24.9
200	93.3	74.7	86	30	24
150	65.6	52.4	84	28.9	23.1
112	44.4	35.2	82	27.8	22.2
110	43.3	34.7	80	26.7	21.3
108	42.2	33.8	78	25.6	20.4
106	41.1	32.9	76	24.4	19.6
105	40.6	32.4	74	23.3	18.7
104	40	32	72	22.2	17.8
103	39.4	31.6	70	21.1	16.9
102	38.9	31.1	68	20	16
IOI	38.3	30.7	66	18.9	15.1
100	37.8	30.2	64	17.8	14.2
99	37.2	29.8	62	16.7	13.3
-0.5	Body )		60	15.6	12.4
	Tem- 36.9	29.5	58	14.4	11.6
98	36.7	29.3	56	13.3	10.7
96	35.6	28.4	54	12.2	9.8
94	34.4	27.6	52	11.1	8.9
92	33.3	26.7	32	0	0
90	32.2	25.8	25	-3.9	-3.1

# TRADE 'TABLOID' BRAND PLEATED COMPRESSED SANITARY TOWELS

Possess many points of superiority over ordinary commercial towels. Extreme compactness and portability are secured by compression—perfect cleanliness



Actual size of 'Tabloid Sanitary Towel (No. 4)

by the method of packing. The material employed is exceptional in quality, in delicacy of texture and in absorbent properties.

'Tabloid' Towels are essential when travelling

Made in fire sizes

NOTE.--Warm the towel after opening. It at once assumes its original size and fullness.

See also page 77

# REQUISITES IN CASES OF CHILDBIRTH

Consideration of the article on The Rules of the Central Midwives' Board (see page 143) will enable the nurse to decide on the necessary equipment to be provided in cases of child-birth. To the nurse whose patient is under the care of a medical practitioner, the following hints may prove useful, whilst to the certified midwife who has complete charge of a case, they are of no less importance.

The centre of the bed, as well as the part on which the patient is lying, must be thoroughly protected by mackintosh cloth, covered by sheets of absorbent cotton, or some similar material, so as to prevent the discharges from reaching the bedding. The danger after childbirth of contact with a foul mattress is obvious. A clean and aired night-dress and binder should be in readiness from the first; those put on immediately after a confinement may become soiled within a short time. A kettle of boiling water should always be at hand. The syringe, previously ascertained to be in working order, should be soaked in an antiseptic solution.

A small quantity of Perfected Wyeth Beef Juice given in cold water or soda water, or in milk and soda water, is a most refreshing and strength-giving drink to a patient.

The following is a summary of requisites mentioned in the article on midwifery practice (see page 143). The midwife should in every case see to their provision before the period at which she expects to be in attendance:—

- 1. 'Soloid' Corrosive Sublimate, gr. 8.75, and 'Soloid' Mercuric Potassium Iodide (formerly known as Iodic-Hydrarg.), gr. 8.75, for preparing antiseptic solutions for instruments, attendants' hands, etc. One of either product, dissolved in a pint of water, makes an antiseptic solution of strength I in 1000.
- 2. 'Soloid' Potassium Permanganate or 'Soloid' Carbolic Acid, for subsequent cleansing of the external parts, etc. (A suitable lotion is quickly made by dissolving 'Soloid' Potassium Permanganate, gr. 5, in half a pint of warm water. 'Soloid' Carbolic Acid, gr. 20, dissolved in two ounces of water makes a solution approximately of I in 40. 'Soloid' Carbolic Acid, gr. 60, is issued for the purpose of preparing rapidly

- and conveniently larger quantities, gr. 5 for preparing smaller quantities, of solution.)
- 3. 'Soloid' Chinosol, gr. 8.75. One in a pint of water makes a 1 in 1000 solution, suitable for sterilising diapers, etc.
- 4. 'Soloid' Protargol, gr. 4. One in a dessertspoonful of warm water as a lotion for the child's eyes.
- 5. 'Soloid' Boric Acid, gr. 15. One in one to four ounces of water, to clean feeding bottles, to wash out the child's mouth, and to bathe the mother's nipples.
- 6. 'Ernutin' (Hypodermic), for hypodermic or intramuscular use. Dose, five to ten minims. 'Ernutin,' for oral administration. Dose, for administration by the mouth, thirty to sixty minims. 'Tabloid' Compound Liquorice Powder, gr. 30. 'Tabloid' Cascara Sagrada, gr. 4.
- 7. 'Phenofax' or 'Borofax,' for lubricating examining finger, catheter, nozzle of enema syringe, etc.
- 8. Pleated Compressed Absorbent Cotton Wool, Boric Lint and Boric Gauze, 'Tabloid' brand. The sterilised products are to be preferred (see page 75).
- 9. A bottle of Perfected Wyeth Beef Juice.
- 10. Sal Volatile or Brandy should be near at hand in case of exhaustion. It must be remembered, however, that cardiac stimulants are somewhat dangerous in the syncope which accompanies hæmorrhage.
- 11. 'Dartring' Lanoline Toilet Soap, and 'Dartring' Lanoline.
- 12. An antiseptic powder for dressing the cord.
- 13. 'Hazeline' will often be found extremely useful for dressing sore or tender nipples, and for bed sores. For application to the nates, etc., of the infant when the diapers are changed, 'Hazeline' Cream or 'Borofax' is recommended. When this is done, redness and irritation of the baby's skin from contact with the evacuations are extremely rare.
- 14. A new and clean No. 8 soft catheter, which should always be sterilised before being employed in another case. A hard catheter, either of silver or of glass, should also be provided. Any of these may be sterilised by boiling.

## SUGGESTED LIST OF REQUIRE-MENTS FOR AN OPERATION IN A PRIVATE HOUSE

It is obvious that the following list will require modification to suit each particular case, and it will be well, therefore, for the nurse to have an early consultation with the surgeon in charge, and receive from him, in writing if possible, a list of those things that she will be expected to provide. It is always advisable to have this list revised the day before the operation, so that nothing may be missing at the critical moment. The following suggestions are offered as a groundwork on which the special requirements of each case may be framed:—

- Small table, to be reserved exclusively for surgeon's instruments. Strong table for patient, not too wide.
   Firm mattress, or two blankets folded to the size of an
- 2. Firm mattress, or two blankets folded to the size of an ordinary single mattress, covered with a mackintosh sheet. This sheet should be large enough to turn under at the sides and ends, and should be secured by strings or straps, although good safety pins will serve in an emergency.
- 3. Pillow of horse-hair, encased in mackintosh sheet beneath the ordinary linen cover.
- 4. Soft towel placed conveniently for the anæsthetist, also small sponge and porringer.
- 5. Small blanket, or sheet of new flannel, in addition to coverings already over the patient.
- 6. A kettle of boiling water for emergencies, in addition to the supply for surgeon's instruments, dressings, etc.
- 7. Foot-warmers should be filled, and kept hot and easily accessible. A foot warmer should never be used without a well-fitting flannel cover.
- 8. Two or three pails, or a bath, into which to empty water.
- 9. The instruments are supplied by the operator, and put, according to his special directions, in the antiseptic solution he prefers.
- 10. If porringers and receivers cannot be had, the nurse must collect half a dozen basins and pie dishes. Glass dishes can be used for instruments.
- 11. Plenty of towels and soap. Two new nail brushes to be soaked until required in a 1 in 1000 solution of "biniodide," made by dissolving 'Soloid' Mercuric Potassium Iodide (formerly called Iodic-Hydrarg.), gr. 8.75, in a pint of water; or in a 1 in 1000 solution

- of corrosive sublimate, made by dissolving 'Soloid' Corrosive Sublimate, gr. 8.75, in a pint of water.
- 12. Two or three mackintoshes.
- 13. Absorbent cotton, lint, antiseptic gauze, bandages, or any other dressings which the surgeon may especially have ordered. The 'Tabloid' Brand Compressed Surgical Dressings are most generally useful. The sterilised products are to be preferred; being carefully sterilised, and packed under conditions which ensure asepsis, they reach the surgeon and the nurse without the risk of contamination.
- 14. The requisite bottles of 'Soloid' brand chemicals, together with a graduated porringer, or a glass measure. The following are the chemicals more generally used at operations: (1) 'Soloid' L.G.B., for making the special solution of corrosive sublimate enjoined by the Local Government Board, to be used for pouring over excreta, etc.—(2) 'Soloid' Corrosive Sublimate, for preparing antiseptic surgical washes, or for making solutions for disinfecting clothing, sponges, etc.—(3) 'Soloid' Mercuric Potassium Iodide (Iodic-Hydrarg.), for preparing antiseptic solutions for instruments, wounds, sponges, nail brushes, vaginal douches, etc.—(4) 'Soloid' Potassium Permanganate, for making an antiseptic fluid of very general application in the household and sick-room.—(5) 'Soloid' Carbolic Acid, gr. 5, gr. 20, or gr. 60, for preparing antiseptic solutions of any desired strength.

15. Brandy, medicine glass, ball or glass syringe, etc.

- 16. Sponges, previously prepared precisely in accordance with the direction of the surgeon, who usually, however, arranges to bring his own. A washstand, or wooden bench for setting down basins and jugs, or cans of hot and cold water.
- 17. A supply of water, which has been recently boiled and allowed to cool.
- 18. Bowl of ice. Safety pins.
- 19. 'Hazeline' Cream or 'Borofax,' for prevention or cure of the roughness of the skin which antiseptic solutions are liable to induce.
- 20. 'Phenofax,' as an antiseptic and emollient lubricant for the surgeon's hands and instruments.

#### ALPHABETICAL LIST

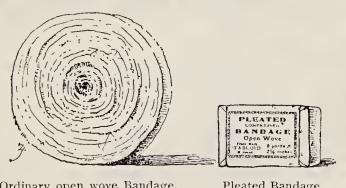
OF

### NURSING REQUISITES

These articles are regularly stocked by, and can be obtained from, all chemists.

Bandages and Dressings, Pleated, Compressed, 'Tabloid' Brand.—The introduction, by Burroughs Wellcome & Co., of Pleated Compressed Bandages and Dressings marks an important advance in the preparation of surgical accessories. These bandages and dressings are made of material of the best quality, and are subjected to great pressure under which each assumes a rectangular shape. Each product is then enclosed automatically in an impervious covering. Sterilised Pleated Compressed Bandages and Dressings are also issued. These are prepared and packed under conditions which ensure that the products remain germfree.

The requirements of modern surgical treatment are so imperfectly fulfilled by many of the cheaper commercial dressings that the superiority of the pleated products of



Ordinary open wove Bandage, 6 yards  $\times$  2½ inches

Pleated Bandage, 6 yards  $\times$   $2\frac{1}{2}$  inches

Burroughs Wellcome & Co. is at once evident. Their important advantages may be thus summarized:

I. Only materials of exceptional quality are used in their manufacture, and their general excellence commends them to critical users.

2. They occupy the smallest possible space and yet can be unfolded as easily as those previously in use.

3. The sterilised bandages and dressings are aseptic, packed under sterile conditions in sterilised packets, and remain aseptic until the sterilised covering is removed.

The antiseptic dressings are evenly charged with

medicament.

5. By reason of their extreme compactness they are by far the best for the hand-bag and cycle- or saddle-case.

The illustration on the previous page graphically demonstrates the saving in space effected by Pleated Bandages and Dressings. The difference in size of an ordinary and a Pleated Bandage is striking. The flat sides of Pleated Bandages enable them to be packed in a fraction of the space required by those previously in use.

The following is a list:—

PLEATED ABSORBENT WOOL BETWEEN GAUZE

2 oz. packets, in packages of I dozen

#### PLEATED BANDAGES

Open Wove,  $2\frac{1}{2}$  in.  $\times$  6 yards, in packages of 1 dozen Flannel,  $2\frac{1}{2}$  in.  $\times$  5 yards, ,, ,, ,, I dozen Triangular (Pictorial), in I dozen packets of 2 bandages

These triangular bandages are of great service in first aid or other emergency work. For the benefit of those who are unable to obtain skilled assistance, illustrations showing the various uses to which the bandage may be put, are imprinted on the fabric itself.

#### PLEATED COTTON WOOL

Absorbent, I and 2 oz. packets, in packages of I dozen I and 2 ,,

Double Cyanide, 3%

I and 2 , , ,, Iodoform, 1 and 2,, 22

COTTON WOOL ('Wellcome' Brand)

Double Cyanide (not compressed), 3%, in packets of 8 oz. and 16 oz.

#### PLEATED GAUZE

Double Cyanide, 3% 3 ,, Iodoform, I and I in.  $\times$  6 Sal Alembroth, 1% 3

,,

,,

PLEATED LINT

PLEATED TOW

Carbolised, 2 oz. packets, in packages of I doz.

SANITARY TOWELS, PLEATED, (compressed), 'TABLOID' BRAND

Pleated Sanitary Towels possess several points of superiority over ordinary commercial sanitary towels.



Half size of Pleated Sanitary Towel (No. 4)

They are made of materials of exceptional quality specially adapted for the purpose. Their highly absorbent properties are particularly noteworthy. The delicate texture of the surface of these towels ensures perfect freedom from the

slightest sense of discomfort in use. Owing to the extremely small space which they occupy, they are particularly convenient when travelling. Extreme compactness is secured by compression and perfect cleanliness ensured by the method of packing.

Five sizes (Nos. 00, 1, 2, 3 and 4) are issued, each size

in packages of 12.

Beef Juice, The Perfected Wyeth.—Of late years the number of sophisticated preparations of meat on the market has greatly increased. To overcome the absence of nourishing properties in "meat extract," egg-albumin, powdered peptone, fibrin, etc., are added to solutions of the "extract," and the mixtures flavoured with celery and other vegetables. In strong contrast to these uncertain preparations, Wyeth Beef Juice is the concentrated nourishment successfully separated from the tissue of the choicest beef only, by a cold process which ensures unaltered nutritive power and a delicious meat flavour. It is rich in albumin derived from the meat and, being both nourishing and stimulating, will of itself support life in critical periods of illness. When feeling the mental and physical strain of her exacting duties, the nurse will find in Wyeth Beef Juice an excellent

invigorator and sustainer, of more real service than any mere stimulant. Half to one teaspoonful may be taken in half a tumblerful of water (aerated if preferred), this quantity representing  $1\frac{1}{2}$  to 3 ounces of prime lean beef.

Beef and Iron Wine (B. W. & Co.).—In this product the solvent is a pure detannated wine, which does not precipitate the nutritive elements of the beef, but retains both beef and iron in an acceptable and readily assimilable condition. The combination of beef, iron and wine is a highly-concentrated strength-giving food and tonic, especially useful in conditions of anæmia and weakness and during convalescence. Very pleasant to take, and well borne by the most debilitated patient. In 8 oz. and 16 oz. bottles.

Blaud Pill, 'Tabloid' Brand.—The most generally effective method of administering iron is by means of 'Tabloid' Blaud Pill, in the production of which B. W. & Co., are enabled to present the iron in the state most readily absorbed by the blood. This feature alone is sufficient to account for the great superiority which medical men have always found in the 'Tabloid' product, since many crude imitations are absolutely inert. The tendency of iron, in some cases, to constipate, may be met by the use of 'Tabloid' Blaud Pill and Aloin, or by 'Tabloid' Blaud Pill and Cascara. In bottles of 100.

'Borofax' (Trade Mark).—An antiseptic, emollient and sedative preparation, superior to the ointment or glycerin of boric acid. 'Borofax' is uniform in consistence and composition, and never becomes rancid. It prevents or relieves irritation of the skin or mucous surfaces, cleanses and soothes the part, and promotes healing. It may be applied to the fingers to facilitate massage, and may be used to lubricate the hands or surgical instruments. In collapsible tubes. 'Dartring'

#### 'DARTRING' BRAND PRODUCTS

The 'Dartring' Brand appears on all labels of the genuine original Lanoline products



TRADE MARK

'Dartring' Lanoline.—The highly purified fat of lambs' wool. Emollient, protective and soothing. Will not support germ life, and never becomes rancid. Supplies the skin with the fat natural to it. In 1-lb. and 7-lb. tins.

- 'Dartring' Lanoline Cold Cream.—Can be used for all the purposes of ordinary cold cream, compared with which it will be found greatly superior. In 2 oz. pots.
- 'Dartring' Lanoline Pomade.—A useful cosmetic, and a safe and effective stimulant of the growth of the hair.

  In 2 oz. pots.
- 'Dartring' Toilet Lanoline.—A necessity at the toilet table. Used in roughness, redness, sunburn, and other conditions of the skin caused by the cold winds of winter or by the heat of summer. Its ready absorption by, and softening effect upon the tissues render it an effective remedy, in continued use, for the removal of wrinkles. Applied to cuts, abrasions, burns, etc., it allays pain, and promotes ready healing. It should always be employed by nurses, whose hands are liable to be affected by antiseptic solutions. In collapsible tubes of two sizes.
- 'Dartring' Lanoline Toilet Powder.—A soothing, emollient and hygienic dusting powder, closely resembling the fat natural to the human skin, which has for its office the preserving of the integument in a healthy, supple condition. 'Dartring' Lanoline Toilet Powder is the safe powder to use for the tender skin of infants. In tin boxes with dredger tops.
- 'Dartring' Lanoline Toilet Soap.—The most delightful toilet soap that science can provide or refined taste desire. It contains free 'Dartring' Lanoline, which prevents that injurious drying of the skin commonly felt after the use of ordinary toilet soaps. Perfectly free from excess of alkali and specially suitable for the tender skin of infants. Counteracts the unpleasant effects of hard water, cold winds, or scorching sun. In boxes of three tablets.
- 'Dartring' Lanoline Ichthyol Toilet Soap.—This soap has proved of great service in the treatment of skin diseases such as eczema, and in many irritable conditions it is the only soap permissible. In boxes of three tablets.
- 'Dartring' Lanoline Pine Tar Soap.—A valuable emollient and stimulating antiseptic soap, which is employed in psoriasis and other skin affections. Its use prevents or relieves the undesirable effects, on the skin of the hands and arms, of many antiseptic solutions.
- Diazyme.—An efficient diastatic essence. In 4 oz. and 8 oz. bottles.

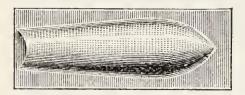
#### TRADE 'ENULE' BRAND RECTAL SUPPOSITORIES

The word 'Enule' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of pure and reliable preparations, this brand should always be specified when ordering.

The conspicuous advantage of shape, possessed by this new brand of suppositories, is well dealt with by Professor Caspari in his *Treatise on Pharmacy*, page 390. He says—"The usual shape of rectal suppositories is that of a cone with



'Enule' Suppository after removal of sheath. This shape originated by B. W. & Co.



'Enule' Rectal Suppository showing sheath of pure tin-foil.

This shape originated by B. W. & Co.

a rounded apex, but the difficulties of readily introducing these into the rectum, on account of the resistance offered by contraction of the sphincter muscle, has led to the designing of a new shape by H. S. Wellcome, of London, the great advantages of which become apparent when it is remembered that the bulbous end is inserted into the rectum first, and that as soon as the greatest diameter, which is about onehalf inch from the point, has been passed, expulsion is impossible by reason of the

very contractile force of the sphincter which renders retention of the ordinary conical shape often so difficult."

Each 'Enule' Suppository is enclosed in a metallic sheath which protects the contents from atmospheric influence, and ensures perfect preservation in all climates. It should be stripped off before use by tearing or cutting away the flange. 'Hazeline' Cream may be smeared over the suppository to facilitate introduction, if desired.

Each kind is supplied in boxes containing one dozen.

'Enule' Brand Rectal Suppositories must be kept in a cool and dry place.

'Enule' Belladonna.—Of three strengths, containing gr. \(\frac{1}{2}\), or gr. 1 of extract of belladonna in each.

- 'Enule' Bismuth Subgallate.—Astringent, antiseptic and sedative. Each contains gr. 10.
- 'Enule' Cocaine Hydrochloride.—Each contains gr.  $\frac{1}{2}$  of this effective sedative to inflamed and painful surfaces.
- 'Enule' Gall and Opium.—Astringent and anodyne. Each contains gr. \(\frac{1}{4}\) of opium extract and gr. 3 of tannic acid, equivalent to gr. 5 of galls.
- 'Enule' Glycerin.—Contains 95 per cent. of glycerin. Used in constipation. This is a prompt, effectual and painless means of emptying the lower bowel, promoting a more rapid and complete action than does the ordinary soft sticky gelatin suppository. Defæcation usually follows within from ten minutes to half an hour. Where continued rectal feeding is necessary, the rectum may with advantage be emptied once in every twenty-four hours by means of a Glycerin 'Enule' Suppository. They are made in two sizes; for children and for adults.
- 'Enule' 'Hazeline' Compound.—Similar in properties to the simple 'Hazeline' Suppository (see page 84), but of greater power since it contains other astringent substances (extract of hamamelis and zinc oxide) in addition to 'Hazeline.' Precautions should be taken to prevent the staining of linen.
- 'Enule' 'Hemisine' (Trade Mark).—'Hemisine' is a preparation of the active principle of the medulla of the supra-renal gland, presenting the sedative, astringent and hæmostatic properties of that body in a convenient and stable condition. Each 'Enule' Suppository is equivalent to 16 minims of 'Hemisine' solution I in 1000. (See also page 89).
- 'Enule' Lead and Opium.—Each contains gr. 3 of lead acetate, and gr. 1 of opium.
- 'Enule' Meat (Predigested).—Children's and Adults' sizes. Contains carefully predigested beef.
- 'Enule' Milk (Predigested).—Children's and Adults' sizes. Contains the peptonised proteids of fresh milk.

Both the Predigested Meat, and the Predigested Milk, 'Enule' Suppositories have proved very successful in rectal feeding. They provide, in small bulk, a maximum of readily assimilable nutriment. Their use is entirely free

- from the rectal discomfort caused by the ordinary nutrient enemata, as they are easily retained without their presence being felt, and they do not cause irritation. To combat the thirst common in cases requiring rectal feeding, if the patient be quite unable to swallow, three to six ounces of warm water should be injected occasionally and retained.
- 'Enule' Morphine and Belladonna.—Each contains gr.  $\frac{1}{4}$  of morphine hydrochloride, together with gr.  $\frac{1}{2}$  of belladonna extract.
- 'Enule' Morphine Hydrochloride.—Of three strengths, containing respectively gr.  $\frac{1}{4}$ , gr.  $\frac{1}{2}$  and gr. 1.
- 'Enule' Opium Extract.—Each contains gr. I of the official extract, and therefore represents about gr.  $\frac{1}{5}$  of morphine in addition to the other alkaloids of opium.
- 'Enule' Quassin, Amorphous.—Each contains gr. ½ of quassin (the bitter principle of quassia wood). This preparation is employed in the treatment of thread worms, one 'Enule' Suppository being administered on each of twelve successive nights. The 'Enule' product is much more convenient for the nurse to administer than are rectal injections of quassia, more especially with young patients. 'Enule' Quassin is readily introduced, retained with certainty, and its employment involves no pain or discomfort.
- 'Enule' Quinine Bisulphate.—Each contains gr. 5 of quinine bisulphate. Used in cases where quinine, administered by the mouth, causes gastric disturbance.
- 'Enule' Santonin.—Each contains gr. 3. One may be inserted at night, and a dose of castor oil or other aperient given by the mouth in the morning.
- 'Enule' Soap Compound.—Each contains gr. 7 of pure curd soap, and gr. 7 of dried sodium sulphate. This preparation is employed for the relief of constipation.
- 'Ernutin' (Trade Mark).—A preparation of the active therapeutic principle of ergot, physiologically standardised, and of assured and uniform activity. The importance of an ergot preparation of confirmed reliability cannot in midwifery practice be over-estimated. 'Ernutin,' for oral adminis-

tration. 'Ernutin' (Hypodermic), for hypodermic and intramuscular injection.

'Forced March,' 'Tabloid' Brand.—This preparation contains the combined active principles of kola nut and coca leaves. It allays hunger, and prolongs the power of endurance in those undergoing severe mental strain or physical exertion. Its use in warding off fatigue during military operations entailing great exertion has provided its well-known name.

#### TRADE 'HAZELINE' BRAND PREPARATIONS

(Remember the Trade Mark)

'Hazeline' Brand of Distilled Hamamelis virginiana. —A transparent aromatic fluid obtained by distillation from the fresh young twigs of the shrub. The mode of manufacture secures the valuable volatile principles of which the dried drug used for preparing the tincture and fluid extract is wholly destitute. 'Hazeline' is a very useful application for general purposes. It is soothing, astringent and styptic. Applied undiluted to an ordinary cut, it stops the bleeding and keeps the wound clean. Mixed with an equal quantity of water it is a soothing and effective dressing for burns and scalds, and may be daily sponged over the skin of bed-ridden patients as a precaution against bed-sores. A tablespoonful added to the water, greatly increases the enlivening effect of a wash, either for nurse or patient, and a little sprayed over coverlet or carpet, freshens up the atmosphere of the sick-room. 'Hazeline' may also be used as an embrocation, or applied as a compress on flannel freshly wrung out of hot water, or mixed with an equal quantity of warm water as an injection. Internally, one to three teaspoonfuls may be given. For external or internal use, 'Hazeline' is entirely harmless. In 4 oz. and 16 oz. bottles.

'Hazeline' Cream.—An improvement on ordinary Cold (Trade Mark) Cream. 'Hazeline' is astringent, styptic and anodyne. 'Dartring' Lanoline is penetrating, emollient, and very closely resembles the natural fat of the human skin. 'Hazeline' Cream, the combination of these two valuable agents, renders the skin smooth and elastic, and is especially useful in irritation of the skin which may lead to bed sores, also for abrasions, chapping, insect stings, etc.

Those who frequently employ antiseptic solutions should regularly use 'Hazeline' Cream to prevent or remove the roughness of the skin which such solutions are liable to induce. In glass pots and collapsible tubes.

"'Hazeline' Snow."-A cooling, soothing and healing appli-(Trade Mark) cation, containing 50 per cent. of 'Hazeline.' It is particularly agreeable for toilet purposes, inasmuch as it contains no glycerin and no fat, and is neither sticky nor greasy. It removes all roughness and redness, abrasions, chaps and similar disfigurements. glass pots.

'Hazeline' Suppositories .- Soothing and astringent. These (Trade Mark) suppositories contain pure 'Hazeline.' They do not stain linen. In boxes containing 12 (see also 'Enule' 'Hazeline' Compound, page 81).

Ammonium Chloride ('Vereker').—When properly charged, delivers perfectly neutral fumes of ammonium chloride. Easily taken apart and re-set. Does not require re-charging every time it is used.

#### TRADE 'KEPLER' MALT PRODUCTS

NOTE. - Many attempts are made to imitate 'Kepler' Malt Products, and it is necessary to take precautions against substitution, since malt preparations vary greatly in medicinal value.

'Kepler' Malt Extract is a powerful digestive, and a highly-nourishing tonic food. It is prepared from the finest winter-malted barley, and has a very pleasant flavour.

To children, 'Kepler' Malt Extract is most acceptable. Added to warm gruel, or porridge, its digestive properties are soon demonstrated by the increased fluidity of the food. It imparts to all farinaceous foods an agreeable flavour and sweetness, whilst its digestive power greatly assists the assimilation of their nutritious principles. The testimony of the medical journals is unanimous as to the excellence of

'Kepler' Malt Extract. In bottles of two sizes.

"It is the best known and, in this country, the most largely used extract of malt. It is as distinct an advance in therapeutics as was the introduction of cod liver oil."—The Lancet.

'Kepler' Malt Extract with Chemical Food (Phosphates Compound).-This is a very valuable nutrient tonic. A greatly improved form of the popular Parrish Syrup.

- 'Kepler' Malt Extract with Hæmoglobin.—Hæmoglobin represents the natural iron constituent of the blood, and is said, therefore, to be absorbed more easily than any other preparation of iron. Combined with 'Kepler' Malt Extract it is presented in a condition which ensures assimilation without disturbance of digestion.
- 'Kepler' Solution (of Cod Liver Oil in Malt Extract).—
  The finest cod liver oil dissolved in 'Kepler' Malt Extract. For those patients whose digestion is easily upset, 'Kepler' Solution is indicated when cod liver oil is required. Owing to its agreeable flavour, it is readily taken even by young children. Rapid assimilation is assured. In bottles of two sizes.
  - "An ideal form for the administration of fat. The taste of the oil is agreeably disguised, its nutritive qualities are greatly increased, and it is rendered easy of digestion."—British Medical Journal.
- 'Kepler' Solution with Hypophosphites.—The hypophosphites are of marked value in many depressed conditions of the system. Combined with cod liver oil and 'Kepler' Malt Extract their efficacy is greatly increased. For weakly, ill-nourished, small-framed children, 'Kepler' Solution with Hypophosphites works wonders. In bottles of two sizes.
- 'Lanesine,' 'Dartring' Brand.—For counteracting insect stings. A small quantity is to be thoroughly rubbed into the wound, and the surrounding skin. In collapsible tubes.
- Lanoline.—(See 'Dartring' Brand Products, pages 78, 79)
- Laxative Fruit, 'Tabloid' Pastille.—As acceptable as a sweetmeat. A palatable and efficient aperient, painless and certain in action. (See also page 93). In tins of two sizes.
- Menthol Snuff (B. W. & Co.).—Composed of menthol, eucaine, ammonium chloride, camphor and lycopodium. Very effective in catarrhal conditions of the nasal mucous membrane, relieving congestion and the feeling of stuffiness in the head. In enamelled tins resembling old-fashioned black and gold snuff boxes.
- 'Opa' (formerly known as 'Salodent')—An aromatic, antiseptic (Trade Mark) liquid, containing salol, eugenol, 'Pinol' and other active agents. 'Opa' is an efficient and valuable dentifrice, and a pleasant and stimulating mouth-wash. The difficulty of keeping the mouth and teeth "surgically" clean, makes

- 'Opa' an essential in nursing practice. A few drops may be sprinkled on the tooth brush, or diluted with a glassful of water. In bottles containing 2 and 4 fluid ounces (with sprinklers).
- 'Panopepton.'—Beef and bread peptone. A concentrated (Trade Mark) predigested food and stimulant. In 6 oz. and 12 oz. bottles.
- 'Pepsencia.'-For preparing digestive junket, curds and (Trade Mark) whey. In 4 oz. and 8 oz. bottles.
- 'Peptogenic Milk Powder.'—For preparing a food for (Trade Mark) infants, which is practically identical with human milk. In bottles of two sizes.
- 'Pepule' Brand Pepsin, gr. I and gr. 3 (sugar-coated). In bottles of 25 and 100.
- 'Pepule' Brand Pepsin and 'Zymine' (sugar-coated).

  In bottles of 25 and 100. (Trade Mark)
- 'Pepule' Brand Pepsin, Bismuth and 'Zymine' (sugar-coated). In bottles of 25 and 100. (Trade Mark)
- 'Pepule' Brand 'Zymine,' gr. 3 (sugar-coated). In bottles of 25 and 100. (Trade Mark)
- 'Pepule' Brand 'Zymine' Compound ('Zymine,' Bismuth (Trade Mark) and Ipecacuanha) (sugar-coated). In bottles of 25 and 100.
- Peptonising Tubes.—(See 'Zymine' Peptonising Tubes, page 102).
- Phenofax' (Trade Mark).—Presents the valuable antiseptic, anæsthetic and healing properties of pure phenol (of which it contains 7 per cent.) in a combination specially convenient for application. 'Phenofax' relieves itching, and cleanses and soothes the part. Its emollient nature and antiseptic power make 'Phenofax' an excellent lubricant for the hands, and for catheters, etc., in obstetric and general surgical nursing. In glass pots.
- 'Saxin' (Trade Mark), gr. ‡.—" The sweetest thing on earth." Now extensively used in the place of saccharin, to which it is superior in flavour, as a sweetening agent (which passes through the system unchanged) in the dietary of patients suffering from gout, diabetes, obesity, etc. On account of its portability, concentration and permanence, it is a valuable adjunct to the stores of voyagers, tourists, picnic

parties, etc., in place of sugar, than which it is some 600 times sweeter, a quarter of a grain being equivalent to an ordinary lump of sugar. In bottles of 100, 200 and 500.

Sodium Citrate.—Milk treated with sodium citrate forms in the stomach a light, finely divided, flocculent curd, which is easily digested. The method is readily carried out, and enables the nurse to provide proper nourishment to a child, who may previously have suffered from vomiting, diarrheea, griping, wasting and symptoms of rickets. The treatment is also employed during the weaning period, and physicians recommend it for adults suffering from pneumonia, gastritis, neurasthenia, etc. One 'Tabloid' Sodium Citrate, gr. 2, dissolved in a little water, is added to each ounce of milk. (See also article on The Feeding of Infants and Children, page 125.) In bottles of 100.

'Xaxa' (Trade Mark).—Acetyl-salicylic acid is frequently prescribed by physicians where salicylic acid and the salicylates were formerly employed. 'Xaxa' is a brand name which denotes preparations of acetyl-salicylic acid issued by Burroughs Wellcome & Co. 'Tabloid' 'Xaxa' presents pure acetyl-salicylic acid, and contains no free salicylic acid. In bottles of 25 and 100.

#### TRADE 'SOLOID' BRAND PRODUCTS

The word 'Soloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of pure and reliable preparations, this brand should always be specified when ordering.

The following 'Soloid' Brand products are medicinal and chemical substances, or compounds of such substances, which are largely used as antiseptics, astringents, chemical

which are largely used as antiseptics, astringents, chemical reagents, etc. They are accurate in weight, pure and convenient. Not being intended for internal use, they are manufactured in the distinctive shape here drawn. By simply dissolving them in water, the lotions and antiseptic solutions in ordinary use can readily be prepared. In some cases (those of potent poisons) they are distinguished from drugs intended for internal administration by the addition of a harmless artificial colour, which tinges the fluid in which they are dissolved, and forms a safeguard against mistake.

B. W. & Co. Products are prepared with materials of exceptional purity.

- 'Soloid' Brand Alum, gr. 10.—A useful astringent in sore throat or for mouth washes, lotions, etc. Supplied in bottles of 100.
- 'Soloid' Brand Argyrol, gr. I and gr. 5.45.—Furnishes a non-irritating antiseptic lotion for bathing the eyes, and for injections. Valuable for applying to the eyes of the new-born child. Gr. I in II minims, or gr. 5.45 in one drachm, of water forms a suitable strength.
- 'Soloid' Brand Boric Acid, gr. 6 and gr. 15.—A non-irritating antiseptic, largely used in solution for dressings, washing wounds, etc. 'Soloid' Boric Acid, gr. 6, is perfumed with otto of rose. One dissolved in an ounce of warm water forms a solution of boric acid in rose water of suitable strength for eye lotions, etc. 'Soloid' Boric Acid, gr. 15, being very convenient, is largely used for preparing antiseptic solutions, injections, etc. One (gr. 15) to each ounce of hot water forms a saturated solution for antiseptic purposes in general. The gr. 6 strength is supplied in bottles of 25, and gr. 15 in bottles of 50.
- 'Soloid' Brand Boric Acid and Zinc Sulphate.—
  Astringent in addition to the antiseptic properties of the preceding preparation. Perfumed with otto of rose.

  Supplied in bottles of 25.
- 'Soloid' Brand Carbolic Acid (Phenol), gr. 5, gr. 20 and gr. 60.—One of the most generally useful antiseptics. Of great service in operations, and for cleansing instruments, etc. 'Soloid' Carbolic Acid is the most convenient means yet devised for preparing antiseptic, deodorizing and disinfecting solutions. The measuring or weighing of a somewhat intractable and dangerous substance is avoided, since the I in 20 (5%) solution is readily prepared by agitating one 60 grain product in  $2\frac{3}{4}$  oz. of warm soft water till entirely dissolved. The solution may then be further diluted to any degree desired. The gr. 5 strength is supplied in tubes of 25, gr. 20 in tubes of 12, and gr. 60 in tubes of 6.
- 'Soloid' Brand Chinosol, gr. 1.75 and gr. 8.75.—This is used as a non-poisonous substitute for carbolic acid, than which it is a more powerful antiseptic. 'Soloid' Chinosol, gr. 8.75, in half a pint, or gr. 1.75 in 2 ounces, of water, yields a solution of 1 in 500, which is stated to be equal in

- effect to 1 in 40 solution of carbolic acid. Both strengths are supplied in bottles of 25, and gr. 8.75 also in bottles of 100.
- 'Soloid' Brand Cocaine Hydrochloride, gr.  $\frac{1}{2}$  and gr. I. Supplied in bottles of 25 and 100; gr. 5 supplied in bottles of 25.
- 'Soloid' Brand Corrosive Sublimate (Hydrarg. Perchlor.), gr. 1.75, gr. 8.75, gr. 17.5, 0.5 gramme (gr. 7.71) and I gramme (gr. 15.43).—A powerful germicide and poison. For the preparation of solutions for douches, cleansing purposes, disinfection, and for sterilisation of the skin or of sponges, etc. Gr. 1.75, dissolved in 4 oz. of water, gr. 8.75 dissolved in a pint of water, and gr. 17.5 in a quart of water, yield solutions of a strength of I in 1000. The gr. 1.75 strength is supplied in bottles of 100, gr. 8.75 in bottles of 25 and 100, gr. 17.5 in bottles of 100, 0.5 gramme in bottles of 25 and 100, I gramme in tubes of 10 and bottles of 25.
- 'Soloid' Brand Eucaine Hydrochloride, gr. I and gr. 5.
  'Soloid' Brand Eucaine Lactate, gr. I and gr. 5.—
  These salts of eucaine are much used in place of cocaine, being equal to cocaine in anæsthetic power whilst far less poisonous. Solutions of eucaine can be sterilised by boiling without losing their anæsthetic power as do those of cocaine. Eucaine lactate is very soluble, 20% solutions being readily made. Both strengths of both salts are supplied in bottles of 25.
- 'Soloid' Brand Ferric Chloride, gr. 10.—This product allows of the immediate preparation of solution of iron perchloride, and avoids the risk of damage from fracture of stock bottles of the fluid. Ferric chloride is a valuable styptic and astringent, and a solution is largely employed as an intra-uterine douche in hæmorrhage after child-birth. One product dissolved in sufficient water to produce 40 minims forms a solution equivalent to the Liq. Ferri Perchloridi of the British Pharmacopæia. Supplied in bottles of 100.
- 'Soloid' Brand 'Hemisine' (Trade Mark), 0.0012 gramme and 0.005 gramme.—A preparation of the active principle of the medulla of the supra-renal gland. 'Hemisine' differs from other preparations of this active principle by

- being issued in a dry, soluble condition. It is perfectly stable in all climates. Active solutions may be made at the moment required by means of 'Soloid' 'Hemisine,' as follows:—One 0.0012 gramme product dissolved in 1.2 c.c. (20 minims)—or one 0.005 gramme product in 5 c.c. (84 minims)—of sterile distilled water, produces a solution containing one part of 'Hemisine' in 1000 of normal saline. It is advisable to prepare only the exact quantity required. Each strength is supplied in tubes of 6.
- 'Soloid' Brand 'Hemisine' Compound with Eucaine, No. 1. and No. 2.—One of the No. 1 strength dissolved in 100 c.c. (approximately 3½ fl. oz.), or one of the No. 2 strength in 10 c.c. (approximately 170 minims), of water, yields a saline solution containing 'Hemisine' I in 100,000 and eucaine hydrochloride 2 in 1000. No. 1 is supplied in tubes of 6, and No. 2 in tubes of 12.
- 'Soloid' Brand, L.G.B.—Provides for the convenient preparation of the standard disinfectant solution of corrosive sublimate. One dissolved in a pint of water forms a solution of the character recommended in the Local Government Board Memorandum, 1892, for use in case of cholera, typhoid fever, etc. Supplied in bottles of 100.
- 'Soloid' Brand Lead and Opium Lotion.—One or more, in hot water, to make a sedative anodyne lotion of the required strength. The lotion should always be shaken before use. Supplied in bottles of 25.
- 'Soloid' Brand Lead Subacetate, gr. 10.—Two dissolved in half a pint of distilled water form a solution containing approximately the same quantity of lead subacetate (quite different from the ordinary acetate of lead) as an equal volume of the official Liquor Plumbi Subacetatis Dilutus (Goulard Water). 'Soloid' Lead Subacetate is the most convenient and permanent means of preparing this household remedy. Supplied in bottles of 25.
- 'Soloid' Brand Mercuric Potassium Iodide (formerly known as Iodic-Hydrarg.), gr. 1.75, gr. 4.37 and gr. 8.75.— This preparation affords the most convenient means of producing what is frequently known as mercury biniodide solution. As an antiseptic it is more powerful than corrosive sublimate, though not so virulent a poison; moreover, since it does not coagulate albumin, it is much more cleanly in use.

- One of the gr. I.75 strength dissolved in four ounces, or one of the gr. 8.75 in a pint, of water, yields a solution of I in 1000. This solution is used for nail brushes, rinsing soiled sponges, etc. Diluted with from one to four times its volume of water, the solution may be used as an antiseptic wash for the hands, instruments, etc. Each strength is supplied in bottles of 25 and 100.
- 'Soloid' Brand Nasal Sodium Bicarbonate Compound.

  —One powdered and dissolved in two ounces of warm water, forms a spray or douche for the nose, throat and mouth. Useful for nurses, to prevent septic catarrhal discharges from their own persons and for use in conditions of thrush, etc., in infants. Supplied in bottles of 100.
- 'Soloid' Brand Paraform, gr. 5.—For disinfecting, one should be used for every thirty cubic feet of space. Heat on a dish over a spirit lamp; carefully stop all outlets, and leave undisturbed for at least twelve hours. Supplied in bottles of 100.
- 'Soloid' Brand Potassium Permanganate, gr. I and gr. 5.—A powerful oxidizer and deodorant. One of the gr. 5 strength in a pint of water forms a solution suitable for a mouth-wash, gargle, lotion, injection, etc., and for disinfecting purposes. This solution possesses the great advantage of being non-poisonous. The gr. I strength is supplied in bottles of 100, gr. 5 in bottles of 25 and 100.
- 'Soloid' Brand Potassium Permanganate and Alum.

  —This product combines the astringent properties of alum (5 grains) with the antiseptic value of potassium permanganate (3 grains). Supplied in bottles of 100.
- 'Soloid' Brand Zinc Sulphate, gr. I and gr. Io.—One grain dissolved in one to two ounces of distilled water forms a stimulant and astringent lotion for the eyes. One to two of the gr. Io products dissolved in a pint of water form a suitable solution for injections, washing wounds, etc. Both strengths are supplied in bottles of 100.
- 'Soloid' Brand Chemicals for Testing Purposes, etc.

  —These 'Soloid' Brand products are issued of such accurate weight as to render them suitable for use in water, urine and sewage analysis, as test indicators, and as microscopic stains.

#### TRADE 'TABLOID' BRAND

# MINERAL WATER SALTS

(Effervescent, Artificial)

Contain the essential constituents of the various waters in an agreeable and conveniently portable condition, and thus provide the means of converting ordinary spring water into a refreshing draught of the desired mineral water.

Compared with the bottled waters, they have many advantages. They keep well and always yield a perfectly



fresh water; they are more pleasant, as the draught is effer-

vescent and exhilarating.

When required in full effervescence the 'Tabloid' Brand products should be powdered before being added to the water.

- 'TABLOID' BRAND CARLSBAD (Sprudel) SALT
- 'TABLOID' BRAND KISSINGEN (Rakoczy) SALT
- 'TABLOID' BRAND SELTZER SALT
- 'TABLOID' BRAND VICHY (Grande Grille) SALT
- 'Tabloid' Brand Vichy (Grande Grille) Salt and Lithium Citrate

Each kind is supplied in tubes of 25.

#### TRADE 'TABLOID' Brand PASTILLES

A useful series of preparations of such medicaments as may be advantageously administered in pastilles is now issued under the title of 'Tabloid' Brand Pastilles. The list contains several new combinations, which it is believed will be found useful additions to those already in general use.

'Tabloid' Pastilles are prepared in the B. W. & Co. Laboratories under the immediate supervision of expert pharmacists. They accurately contain the stated quantity of medicament in an unaltered and active state. Many preparations of this nature are so readibly soluble that the prolonged application of the medicament is impossible. 'Tabloid' Pastilles dissolve slowly and uniformly, so ensuring the gradual and prolonged application to the mouth and throat of medicaments presented in a pleasant condition,

whilst they may also be employed, in suitable cases, to obtain a general action. The demulcent basis of the pastille increases the efficacy of the active ingredients.

#### LIST OF 'TABLOID' BRAND PASTILLES

#### 'TABLOID' BRAND PASTILLE—

- ,, Ammonium Chloride and Liquorice. Each contains ammonium chloride, gr. 1.
- ,, Benzoic Acid Compound. Each contains benzoic acid, gr. 1/2; cocaine hydrochloride, gr. 1/40; codeine, gr. 1/10; ipecacuanha powder, gr. 1/10; menthol, gr. 1/10; and red gum, gr. 1/2.
- " Cocaine Hydrochloride, gr. 1/10.
- ,, Codeine, gr. 1/8.
- ., GLYCERIN.
- ,, GLYCERIN AND BLACK CURRANT.
- ,, GLYCERIN, TANNIN AND BLACK CURRANT. Each contains tannin, gr. 1/2.
- GLYCERIN, TANNIN, CAPSICUM AND BLACK CURRANT. Each contains tannin, gr. 1/2, and the equivalent of capsicum tincture, B.P., min. 3/4, equal to capsicum, gr. 3/80.
- fruit, gr. 5, pleasantly flavoured. As palatable and acceptable as a sweetmeat. The difficulty the nurse encounters in administering a purgative to children and fastidious patients is entirely overcome by the use of 'Tabloid' Laxative Fruit Pastille. It acts with certainty, and causes neither griping nor other discomfort. It forms a suitable aperient for pregnant or nursing women, and where required, the laxative effect may be exerted on the infant through the mother's milk.
- " LEMON JUICE.
- ,, Linseed, Liquorice and Chlorodyne. Each contains morphine hydrochloride, gr. 1/120.
- ", MENTHOL, gr. 1/8.
- ,, MENTHOL AND EUCALYPTUS. Each contains menthol, gr. 1/20, and eucalyptus oil, min. 1/2.

#### 'TABLOID' BRAND PASTILLE—

,, Morphine and Ipecacuanha. Each contains morphine hydrochloride, gr. 1/36, and ipecacuanha powder, gr. 1/12.

, PINE TAR COMPOUND.

,, 'PINOL,' min. I.

,, RED GUM AND COCAINE. Each contains red gum,

gr. 1, and cocaine hydrochloride, gr. 1/20.

,, Krameria, Menthol and Cocaine. Each contains krameria (rhatany) extract, gr. 2; menthol, gr. 1/20; and cocaine hydrochloride, gr. 1/20.

#### TRADE 'TABLOID' BRAND PRODUCTS

The word 'Tabloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of pure and reliable preparations, this brand should always be specified when ordering.

Under the 'Tabloid' brand is issued an immense variety of pure drugs and chemicals and their combinations, divided into accurate doses, and prepared with due regard to their therapeutic uses.

LIST OF A FEW 'TABLOID' BRAND PRODUCTS	1
'TABLOID' BRAND— Each contai	ns
,, Aloes and Iron (B. P. Pill) (sugar-coated) - gr.	4
" Aloes and Myrrh (B.P. Pill) (plain or sugar-coated) gr.	4
,, Aloin - $(plain)$ , gr. $\frac{1}{10}$ , and $(sugar-coated)$ gr.	$\frac{1}{2}$
" Aloin Compound (plain or sugar-coated).—Aloin gr.	1,
with belladonna, ipecacuanha and strychnine.	
" Ammoniated Quinine (sugar-coaled).—Containing quining	

sulphate and ammonium bicarbonate to correspond to one fluid drachm of the official tincture.

,, Ammonium Chloride and Liquorice, respectively gr. 3 and

gr. 2 ,, Antifebrin - - - - - - gr. 2 and gr. 5

,, Antipyrine (sugar-coated) - - - gr.  $2\frac{1}{2}$ 

,, ,, (plain or sugar-coated) - - gr. 5

B. W. & Co. Products are prepared with materials of exceptional purity.

<sup>&#</sup>x27;Tabloid' Brand Products are plain unless otherwise described.

'TABLOID' BRAND— Each contains
"Astringent Mixture.—Contains catechu, opium, oil of
cinnamon, chalk and other astringents, aromatics,
and antispasmodics, to correspond to the Board of
Health formula.
,, Bismuth and Soda of each gr. $2\frac{1}{2}$
,, Bismuth Carbonate gr. 5
,,
"Bismuth, Rhubarb and Soda.—Bismuth subnitrate, gr. 3;
rhubarb, gr. I; sodium bicarbonate, gr. 2.
"Bismuth Subnitrate gr. 5 and gr. 10
"Blaud Pill (sugar-coated) gr. 5 and gr. 8
Note.—Be particularly careful to prevent the substitution of imitations of this superior preparation. 'Tabloid' Blaud Pill ensures
tions of this superior preparation. 'Tabloid' Blaud Pill ensures
the administration of the blood-enriching ferrous carbonate in an unoxidized condition.
"Blaud Pill and Aloin (sugar-coated), respectively gr. 4 and
$\operatorname{gr.}_{\overline{20}}$
"Blaud Pill and Cascara (sugar-coated), respectively gr. 4
and gr. $\frac{1}{2}$
"Blue Pill gr. 4
,, Blue Pill and Rhubarb Compound - of each gr. $2\frac{1}{2}$
,, Blue Pill, Colocynth and Hyoscyamus
" Caffeine Citrate gr. 2
,, Caffeine Citrate, Effervescent, B.P gr. 60
Each contains about gr. $2\frac{1}{2}$ of caffeine citrate.
"Caffeine Compound.—Caffeine, gr. 1, and antipyrine, gr. 3
"Calcium Carbonate Compound—Containing calcium car-
bonate, gr. $2\frac{1}{2}$ ; magnesium carbonate, gr. $2\frac{1}{2}$ ; and
sodium chloride, gr. 1.
" Calcium Sulphide (sugar-coated) gr. $\frac{1}{4}$ , gr. $\frac{1}{2}$ and gr. I
,, Calomel, gr. $\frac{1}{10}$ , gr. $\frac{1}{6}$ , gr. $\frac{1}{4}$ , gr. $\frac{1}{2}$ , gr. I, gr. 2, gr. 3 and gr. 5
" Calomel and Jalap - respectively gr. 1 and gr. 3
,, Calomel and Sodium Bicarbonate, respectively gr. $\frac{1}{2}$ and gr. $2\frac{1}{2}$
" " respectively gr. I and
gr. 5

<sup>&#</sup>x27;Tabloid' Brand Products are plain unless otherwise described.

T	ABLOID' BRAND— Each contains
,,	Calomel Compound (Plummer Pill, B.P.) - gr. 4
	Camphor Essence (Saturated)
,,	Capsicum Tincture min. I and min. 5
,,	Cascara Sagrada (Dry Extract) (plain or sugar-coated),
	gr. 1, gr. 2, gr. 3, gr. 4 and gr. 5
7	gr. I, gr. 2, gr. 3, gr. 4 and gr. 5 NOTE.—Attempts are frequently made to substitute unreliable preparations for this <i>true</i> Cascara which is prepared by B. W. & Co., and which has gained a high reputation.
,,	Cascara and Gentian Compound (sugar-coated), - Cascara,
	nux vomica, gentian, belladonna and capsicin.
,,	Cathartic Compound (plain or sugar-coated).—Compound
	extract of colocynth, calomel, jalap and gamboge.
,,	Chalk, Aromatic Powder, with Opium, B.P gr. 5
, ,	Charcoal (Pure Willow) gr. 5
,,	Chemical Food (sugar-coated).—Issued in two strengths,
	containing the combined phosphates of iron, calcium,
	sodium and potassium, respectively equivalent to $\frac{1}{2}$
	and I teaspoonful of chemical food. This forms a
	most convenient and efficient means of administering
	Parrish Syrup free from the disadvantages of acidity
	and excess of sugar which attend the fluid preparation.
	Cinchona Tincture min. 30
,,	'Coffee-Mint.'—Stimulant and gastric sedative. A com-
	bination of 'Tabloid' Soda-Mint with coffee extract
	and cerium oxalate.
,,	Colocynth and Hyoscyamus (B.P. Pill) (plain or sugar-
	coated) gr. 4 Colocynth Compound (B.P. Pill) (plain or sugar-coated),
,,	Colocynth Compound (B.P. Pill) (plain or sugar-coated),
	gr. 4
,,	Dover Powder (Ipecacuanha with Opium) (plain), gr. 1/4
	,, (plain or sugar-coated) gr. 5
"	Easton Syrup (sugar-coated).—In two strengths; equivalent
	to one-half or one teaspoonful of Easton Syrup, forming
	an excellent means of taking this powerful tonic in a
	reliable and tasteless condition.
,,	Effervescent Products include Caffeine Citrate Effer-
	vescent, B.P., gr. 60; Lithium Citrate, gr. 5; Lithium Citrate Effervescent, B.P., gr. 60; Lithium Citrate
	Citrate Effervescent, B.P., gr. 60; Lithium Citrate
	and Sodium Sulphate; Lithium Citrate and Urotro-
	pine; Magnesium Citrate (True), gr. 60; Magnesium

<sup>&#</sup>x27;Tabloid' Brand Products are plain unless otherwise described.

\*TABLOID' BRAND— Each contains Sulphate (Epsom Salt), Effervescent, B.P., gr. 60; Magnesium Sulphate Compound; Piperazine, gr. 5; Potassium Citrate, gr. 15; Quinine Bisulphate and Potassium Citrate; Sodium Phosphate Effervescent, B.P., gr. 60; Sodium Salicylate, gr. 5; Sodium Sulphate (Glauber Salt), Effervescent, B.P., gr. 60; Sodium Sulphate Compound; Three Bromides, etc.

" Euonymin (Euonymus Dry Extract, B.P.) - gr.  $\frac{1}{8}$  and gr.  $\frac{1}{2}$  , Euquinine gr. 5

"Ferric Chloride.—One represents the amount of ferric chloride contained in ten minims of iron perchloride tincture, B.P.

,, 'Forced March' (see page 83).

"body builders."

,, Gentian and Soda Compound.—Gentian, sodium bicarbonate and ammonium carbonate.

"Ginger Essence - - - min. 5 and min. 10 "Glycerophosphates Compound, dr. 1/2 (sugar-coated).—

Containing the combined glycerophosphates of calcium, sodium, potassium, magnesium and iron, with pepsin, diastase, kola, and gr.  $\frac{1}{800}$  of strychnine glycerophosphate, equivalent to drachm  $\frac{1}{2}$  of syrup of glycerophosphates.

"Gregory Powder (Rhubarb Compound Powder) (plain or sugar-coated) - - - - - gr. 5

- ,, Grey Powder, gr.  $\frac{1}{4}$ , gr.  $\frac{1}{3}$ , gr.  $\frac{1}{2}$ , gr. 1, gr. 2, gr. 3 and gr. 5.
- ,, Grey Powder and Sodium Bicarbonate, respectively gr.  $\frac{1}{2}$  and gr.  $2\frac{1}{2}$

,, Grey Powder and Sodium Bicarbonate, respectively gr. I and gr. 5

method of administering the hypophosphites, which have so wide a range of usefulness as tonics and

"Many of the drawbacks of the Standard Compound Syrup are surmounted by this convenient preparation."—The Lancet.

<sup>&#</sup>x27;Tabloid' Brand Products are plain unless otherwise described.

· T	'ABLOID' BRAND— Each contains
,,	Ipecacuanha Wine min. 5
,,	Ipecacuanha with Squill (B.P. Pill) (plain or sugar-coated),
	gr. 4
	Iron and Quinine Citrate (plain or sugar-coated) gr. 3
	Iron Carbonate, Saccharated gr. 5
	Jalap gr. 5
	Laxative Vegetable (plain or sugar-coated).—Podophyllin, gr. <sup>1</sup> / <sub>4</sub> , with compound colocynth extract, jalap, leptandrin, taraxacum, hyoscyamus and peppermint.
,,	Lead with Opium (B.P. Pill) (plain or sugar-coated), gr. 4
,,	Liquorice Compound Powder.—Each represents gr. 30 of compound liquorice powder, B.P.
, ,	Lithium Citrate (Effervescent) gr. 5
	The most convenient means of producing effervescent lithia water of standard strength.
,,	Lithium Citrate Effervescent, B.P gr. 60
	Each contains about gr. 3 of lithium citrate.
,,	Lithium Citrate and Urotropine (Effervescent), respectively
	gr. 5 and gr. 3
	Livingstone Rouser.—Calomel and quinine bisulphate, gr. I of each, with jalap and rhubarb, gr. I of each.
,,	Magnesium Citrate, Effervescent gr. 60
	This produces the true citrate of magnesia in effer- vescent solution. It is a pleasant, gentle saline aperient for children or delicate persons.
,,	Magnesium Sulphate (Epsom Salt), Effervescent, B.P., gr. 60.—Each represents gr. 30 of Epsom Salt.
,,	Magnesium Sulphate Comp., Effervescent.—Epsom Salt, Glauber Salt, magnesium carbonate and ginger.
"	Menthol gr. 4  The menthol is rendered palatable by the addition of a suitable diluent.
,,	Mineral Waters.—(See 'Tabloid' Effervescent Artificial Mineral Water Salts, page 92).
,,	Mistura Alba.—Magnesium sulphate, magnesium carbonate and oil of peppermint.

<sup>&#</sup>x27;Tabloid' Brand Products are plain unless otherwise described.

'TABLOID' BRAND— Each contains
. TABLOID BRAND— Each contains gr. $\frac{1}{200}$ , gr. $\frac{1}{100}$ and gr. $\frac{1}{50}$
"Nux Vomica Compound (sugar-coated).—Nux vomica
extract, aloin, iron sulphate, myrrh and soap, of
each gr. ½
"Nux Vomica Tincture - min. I, min. 5 and min. 10
,, Opium Tincture (Laudanum) min. 2, min. 5 and min. 10
"Paregoric (Compound Tincture of Camphor),
min. 2, min. 5 and min. 15
" 'Pepana' (formerly issued under the title of Peptonic) (plain
or sugar-coated).—Pepsin, calcium lactophosphate and
pancreatin, of each gr. I
,, Pepsin, Saccharated gr. 5
,, Pepsin, Bismuth and Charcoal. — Pepsin, with bismuth carbonate and willow charcoal, of each - gr. 2
"Pepsin, Bismuth and Strychnine.—Pepsin, gr. 2, with
bismuth carbonate, gr. 3, and strychnine sulphate,
gr. $\frac{1}{100}$
"Phenacetin gr. I and gr. 5
,, Phenacetin and Quinine Compound.—Phenacetin, gr. 3, with quinine hydrobromide, gr. $\frac{1}{2}$ , and caffeine, gr. $\frac{2}{3}$
"Phenacetin Compound. — Phenacetin, gr. 4, and caffeine, gr. 1.
Note.—Beware of the substitution of crude imitations of 'Tabloid' Phenacetin, 'Tabloid' Phenacetin and Quinine Compound, and
Phenacetin, 'Tabloid' Phenacetin and Quinine Compound, and 'Tabloid' Phenacetin Compound.
,, Podophyllin gr. $\frac{1}{4}$
"Podophyllin Compound.—Podophyllin, gr. 16, with com-
pound rhubarb pill and hyoscyamus extract.
"Potassium Chlorate gr. 5
,, Potassium Chlorate and Borax
,, Potassium Bicarbonate gr. 5 ,, *Potassium Bromide gr. 5 and gr. 10
,, *Potassium Bromide gr. 5 and gr. 10 ,, *Potassium Iodide gr. 1, gr. 3 and gr. 5
" Potassium Nitrate (Sal Prunella) gr. 5
,, , , , , , , , , , , , , , , , , , , ,

<sup>\*</sup> These 'Tabloid' products should always be administered in solution after food.

<sup>&#</sup>x27;Tabloid' Brand Products are plain unless otherwise described.

'TABLOID' BRAND— Each contains ,, *Potassium Permanganate gr. 1 and gr. 2 ,, Quinine, Ammoniated (sugar-coated).—Containing quinine
sulphate and ammonium bicarbonate to correspond to one fluid drachm of the official tincture.
Quinine Bisulphate, gr. $\frac{1}{2}$ , gr. 1, gr. 2, gr. 3, gr. 4 and gr. 5 (plain or sugar-coated); also gr. 10 (plain only).
" Quinine and Camphor.—Quinine bisulphate, gr. 1; camphor, gr. $\frac{1}{5}$ .
One, dissolved in a wineglassful of water, forms an effervescing draught containing gr. I of quinine bisulphate and gr. 15 of potassium citrate.
,, Red Gum  This pleasant throat lozenge is flavoured with rose.
,, Rhubarb gr. 3
, Rhubarb and Gentian Compound (Stomachic Compound), rhubarb, gentian, sodium bicarbonate and peppermint.
"Rhubarb and Soda (plain or sugar-coated).—Rhubarb, sodium bicarbonate and ginger.
" Rhubarb Compound Pill, B.P. (plain or sugar-coated), gr. 4
"Rhubarb, Soda and Magnesia.—Rhubarb, sodium bicarbonate, magnesium carbonate and ginger.
,, Saccharin gr. $\frac{1}{2}$
" Salicin gr. 5
,, Saccharin $gr. \frac{1}{2}$ ,, Salicin $gr. 5$ ,, Salol $gr. 5$
$g_1, g_2, g_1, g_2$ and $g_1, g_2$
"Santonin and Calomel of each gr. I "Soda-Mint.—Sodium bicarbonate, ammonium bicarbonate
and peppermint.
Note.—Frequent reports have reached us of the substitution of impure imitations of 'Tabloid' Soda-Mint. These imitations sometimes cause intense nausea. Great care should be taken to detect any attempts at substitution.
,, Sodium Bicarbonate gr. 5
,, Sodium Bromide gr. 5 and gr. 10

<sup>\*</sup> These 'Tabloid' products should always be administered in solution after food.

<sup>&#</sup>x27;Tabloid' Brand Products are plain unless otherwise described.

'TABLOID' BRAND-	Each contains
,, Sodium Citrate	gr. 2
For the treatment of milk in the fee and invalids (see page 87).	ding of infants
" Sodium Phosphate, Effervescent, B.P.	- gr. 60
Each represents gr. 30 of sodium pho	
"Sodium Salicylate (physiologically pure, salt)	or the natural
" Sodium Salicylate, Effervescent (physiologic	cally pure), gr. 5
" Sodium Salicylate and Potassium Bicarbonat	ce, of each gr. 5
" Sodium Sulphate (Glauber Salt), Effervescen Each represents gr. 30 of Glauber Salt	
"Strophanthus Tincture	- min. 5
"Sulphonal	- gr. 5
"Sulphur Compound.—Precipitated sulphu	
cream of tartar, gr. 1.	
" Tannin	- gr. $2\frac{1}{2}$
"Tar (Pure Norwegian Pine)	- gr. 1
" Tar and Codeine, respectively gr. 1 and gr	
,, Thirst Quencher.—A refreshing efferves flavoured with 'Saxin' and lemon.	cent, pleasantly
"Three Syrups (sugar-coated).—Easton Sy compound syrup of hypophosphites, m Syrup, min. 30.	rup, min. 15; nin. 15; Parrish
" Three Valerianates (sugar-coated). Quining valerianates, of each gr. 1.	ne, iron and zinc
"Thymol gr. I	gr. 2 and gr. 5
,, Thymol gr. 1, Thyroid Gland gr. $\frac{1}{2}$ , gr. $1\frac{1}{2}$ ,	gr. $2\frac{1}{2}$ and gr. 5
" Tonic Compound (plain or sugar-coated). and strychnine.	—Iron, quinine
,, Trional	- gr. 5
,, Veronal gr. 5, $\frac{1}{2}$ gramme	
"Voice (Potassium chlorate, borax and coca	
Note.—Beware of imitations of this pro	duct.
" 'Xaxa' (Acetyl-salicylic Acid)	- gr. 5
"Zinc Valerianate (sugar-coated)	- gr. 2

<sup>&#</sup>x27;Tabloid' Brand Products are plain unless otherwise described.

- 'Tabloid' Brand Tea provides the most convenient and portable means of preparing tea of uniform strength. No teapot is required, but one or more 'Tabloid' Brand products (according to taste) need only have a cupful of boiling water poured on them. The infusion should be stirred, allowed to stand for three minutes, and then poured off the leaves. 'Saxin,' "the sweetest thing on earth," affords in a very convenient and portable condition, the means of sweetening this and other beverages. 'Tabloid' Brand Tea is issued in two qualities: a pure tea of high quality and delightful flavour; and a Special Blend of the very choicest varieties.
- Terebene, Pure (B. W. & Co.).—In addition to its internal administration, for which this pure product is particularly adapted, pure terebene may be employed for inhalation, either from hot water or by inserting in the spout of a bronchitis kettle a little cotton wool saturated with the fluid. A little sprinkled on the floor agreeably freshens the air of the sick-room. Supplied in 1 oz., 2 oz. and 16 oz. bottles.
- 'Vaporole' Brand Amyl Nitrite, for Inhalation.—Thin glass (Trade Mark) capsules containing min. 3 or min. 5 of amylnitrite, surrounded by cotton wool and enclosed in silken sacs.
- 'Zymine'—The pure digestive ferments of the pancreas. (Trade Mark) In  $\frac{1}{4}$  oz. and I oz. bottles.
- 'Zymine' Peptonising Tubes.—The most convenient means (Trade Mark) of preparing predigested milk, etc. In boxes containing I doz. tubes.

#### AIR SPACE TABLE

Each individual requires 3000 cubic feet of fresh air per hour; hence, in

Workhouses: 300 c. ft. of air require to be changed ten times per hour (great draught).

Barracks: 600 c. ft. require to be changed five times per hour.

Hospitals: 1200 c. ft. to 1500 c. ft. require to be changed twice to three times per hour.

## FOODS AND DIETARY

The Functions of Food.—Food is the fuel by the consumption of which the human machine is provided with heat and force. After undergoing certain changes during the processes of digestion and assimilation, a portion of the carbon and hydrogen of food is slowly consumed by the oxygen which enters the blood during its passage through the lungs. Muscular force and the maintenance of the temperature of the body result from this slow chemical combustion of food. As the combustion of the organic constituents of the body slowly consumes the tissues, it is the function of food not only to provide material for the human furnace, but also to repair the waste that is constantly taking place. Food, therefore, is not merely a source of heat and force, but also a provider of constructive and reparative material.

Classification of Food Material.—Foods may be broadly divided into three classes:—

(A) Albuminoids or Nitrogenous Substances.—The most important is albumin, the main solid constituent of white of egg; others are:—casein (the chief part of the curd of cow's milk), legumin (occurring in peas, beans, etc.), and fibrin (the chief constituent of lean meat). They are force producers and flesh formers, and they repair the waste of the body, and retard oxidation of the tissues.

(B) Carbonaceous Substances, such as starch, sugar, dextrin, fat, etc. These bodies furnish material for oxidation, and are heat producers. They do not, however, form muscular tissue only. The power of fats to maintain heat and to produce bodily force is more than twice that possessed by starch.

(c) Mineral Salts.—These occur in small quantities in nearly all foods, and their constituents are appropriated by various parts of the body according to their special needs. Thus, phosphates are required by the nervous system, iron salts by the blood, lime salts by the bones and teeth, and potassium and sodium salts by the muscles.

The above divisions of food-stuffs, and indications of their functions, are only crude, but, speaking generally, they form the basis of all scientific dietaries for use in health and disease. On page 114 and following pages will be found a series of diet tables specially adapted for use in certain diseases.

The Importance of Albuminoids in Diet.—It has been pointed out that albuminoids are the chief formative and reparative components of food, and they are, therefore, of the greatest possible importance to the human organism. By their oxidation they not only provide heat and force, but without them the substance of muscular tissue could not be formed. It is obvious that while those persons leading easy and sedentary lives with little muscular exercise require but a small allowance of albuminous material, those who lead an active out-door life, and who have much physical work to perform, or those who are recovering from exhausting illnesses, require a large quantity of the invigorating albuminoids.

Albumin absent from Beef Tea.—In view of the importance of albumin in dietary, it is a matter for some surprise that the average housewife, and, for the matter of that, nurses of the older school as well, should credit beef tea and beef extract with a wholly fictitious value in the nourishment of the weak. Until recent years it has been customary to look upon beef tea as the mainstay of the convalescent, and traditions die hard. When the vitality of the patient was at a low ebb, and it was desired to fortify him with nourishing stimulants, the old-time nurse had nothing better to give him than beef tea made direct from the meat, or prepared with the beef extracts and bouillons of the market.

It was supposed that such preparations contained all the nourishment of the beef, whereas, owing to the methods usually adopted, that is precisely what they do *not* contain. The reason why ordinary beef tea and beef extract contain no albumin is because this substance is soluble in water only at a low temperature. As the temperature of such a solution is raised, the albumin coagulates and separates in the form of white curds. This often happens during the usual preparation of beef tea, beef extracts and *bouillons*.

The Cold Process.—When the above facts became known to scientific chemists, the importance of discovering a method of preserving the active *nutritive* constituents of beef in a pleasant and concentrated form became manifest. After much research a process was elaborated by which the actual *nourishing* principles of beef could be extracted *in the cold*, thus avoiding the coagulation and removal of the albumin. It is by this scientific process that the Perfected Wyeth Beef Juice is made.

A Standard Preparation.—The Perfected Wyeth Beef Juice, therefore, contains not only the stimulating principles of beef which are found in beef tea and beef extracts, but also the strength-giving constituents which they do not provide. It has the further advantage of presenting these valuable elements to the weakened digestive organs of the invalid in an unaltered and soluble form. The fine natural beef flavour is also perfectly preserved. The ready digestibility and high state of concentration of the Perfected Wyeth Beef Juice render it of supreme value in sickness and convalescence. Physicians often rely upon it when it is essential to give immediate sustenance, combined with a natural, rapidly-acting stimulant. It is superior to alcoholic stimulants, not only because of its food value, and consequently more prolonged action, but also on account of its freedom from depressing after-effects.

Expert Evidence.—The Lancet, reporting on this preparation, says:—"The Perfected Wyeth Beef Juice has received critical attention in the Lancet laboratory, and the results obtained on analysis gave indisputable evidence of the excellence of this preparation, containing as it does not only the albuminous principles of beef in an active and soluble form, but in the condition in which they occur in the freshly expressed juice of the beef itself."

The British Medical Journal reports: "Containing all the characters of the finest beef, rich in serum albumin, and palatable, this highly-concentrated product is a good model of what such preparations should be, and is much used as a

tonic food in sickness and all stages of convalescence."

Some Uses of Wyeth Beef Juice.—Many uses for such a preparation will at once suggest themselves. So concentrated a nutritive is, in fact, a "golden bridge" for use in all forms of sickness and during convalescence. The percentage of actual nourishment it contains is such that the benefit obtained from it is out of all proportion to the small bulk administered. One teaspoonful represents three ounces of prime lean beef in nourishing and stimulating power.

It has been proved by clinical trial to be of great value as a sustainer of life during exhausting febrile diseases and all debilitating sicknesses. In nervous or muscular prostration, in consumption, and during convalescence from severe illness, it is highly spoken of by physicians as a natural and readily assimilable restorative food. Great benefit is derived in such conditions from taking one-half to one teaspoonful in half a

tumblerful of cold or iced water or milk, as required.

Physicians, barristers, literary men, students and all subject to brain-fag or other effects of overwork, will find that one half-teaspoonful, in about half a tumblerful of aerated water or milk, taken at intervals during the day, and at bedtime, will relieve fatigue, both of mind and body. Nurses in charge of exacting cases find the Perfected Wyeth Beef Juice, taken as indicated above, a valuable strengthening agent.

Beef and Iron Wine (B. W. & Co.).—This is an excellent restorative and stimulant, containing an organic salt of iron dissolved in pure wine to which the soluble and non-coagulable nitrogenous constituents of beef have been added. Each tablespoonful represents about one ounce of the choicest lean beef, with which is associated a readily assimilable salt of iron. The wine used for this preparation is free from tannin, which is frequently present in the beef wines of commerce. Tannin precipitates albuminoids, and the subsequent filtration of the wine, to make it bright, removes some of the nutrient material.

The value of this preparation cannot be over-estimated, and by reason of its palatability, its stability, and the ease with which it is assimilated, it has for a long time been justly approved by the medical profession as a desirable addition to the list of nutrient stimulants. It is comfortably borne by the most delicate and sensitive patient, and is largely used in

all stages of convalescence.

It is necessary to distinguish clearly between the uses respectively of Beef and Iron Wine (B. W. & Co.) and the Perfected Wyeth Beef Juice. The former is a general nutritive tonic and stimulant specially indicated for customary use in the protracted convalescence of invalids, a dose being taken twice or thrice daily after meals. The latter contains both nutritive and stimulant principles in the most highly-concentrated form, and is therefore specially adapted for use in severe sickness, in the early stages of convalescence, for the excessive fatigue and exhaustion of depressed nervous states, and as an effective substitute for a missed meal.

Diet for Invalids.—In hospital the nurse has but little latitude as to diet. The patients are necessarily fed by rule, and the most she can do is to see that they get what is ordered for them in as appetizing a condition as possible.

But it is far otherwise in private and district nursing. It is not too much to say that no nurse is fully qualified for her profession who cannot cook, and show others how to cook, the dishes generally used in a sick room. Moreover, she should study how to prepare common foods in such a way as to make them appetizing to an invalid. There are very few, if any, flavourings used in the kitchen, which, employed discreetly, are out of place in the sick-room.

In preparing a patient who can feed himself, for his meals, prop him up well. A bedroom chair laid on its side behind the bolster makes a capital bed-rest. The food and the plates should be warm—a hot-water chafing dish is an invaluable adjunct to a sick-room—and as daintily set out as circumstances permit. The medical attendant will indicate the dietary

which must be followed by the patient.

Diet for Convalescents.—When a patient is convalescent, and it is desired to give the most nourishing articles of food which the weakened organs of digestion can assimilate, a nurse can do a great deal in aiding the process of recovery. The avoidance of anything like monotony in the bill of fare from day to day is even more necessary than during sickness. During convalescence the Perfected Wyeth Beef Juice has proved most valuable. In addition to being a very nourishing and digestible preparation, it is pleasant to the taste, and can be utilized in many ways. For instance, the tastelessness and somewhat low nutritive value of tripe or boiled fish are both entirely remedied if a little of this beef juice, diluted with water, milk, or some appropriate sauce (not too hot), be added to the dish just before it is served. A small teaspoonful added to a bowl of soup (after it has become sufficiently cool not to coagulate the albuminous constituents of the beef juice) will improve its flavour and increase its nutrient value.

Comparative Digestibility of Foods.—In the following list, the various articles of food are given in the order of their digestibility as laid down by authorities on dietetics. Much, however, depends upon methods of preparation and upon the skill of the cook, as well as upon the quality of the articles chosen.

Rice, tripe (stewed), eggs (raw, whipped, lightly boiled, or poached), baked apples (the pulp only), trout, soles, plaice, whiting, pearl barley, milk (boiled, or in the form of junket), cod, turbot, sweet-bread,

oysters (raw and minced), fricasseed chicken, lamb (roast), venison, most stewed fruits, liver, potatoes (baked and floury), stale bread and butter, turkey, most game, fowls (roast or boiled), mutton, beef (roast and not overdone), sucking-pig.

The following articles are best avoided, as a rule, when

the digestive powers are weak:-

Veal, fresh pork, salt beef, duck, new bread, cooked shell fish, all "made dishes," and meat that has been cooked twice, boiled potatoes, if sodden or "waxy," salt

pork or bacon, stringy vegetables, pastry.

It must also be borne in mind that individuals differ considerably in their power to assimilate certain foods. A weak stomach can be greatly aided by thorough mastication of the food. A patient should be reminded of this, and encouraged to eat slowly. It is part of a nurse's duty to see that the invalid has his meals undisturbed, and that his surroundings, both while eating and afterwards, are favourable to the digestive process.

Duration of Digestion.—The approximate time needed for the digestion of some principal foods is given in the following table:—

Beef, boiled				 3	hours	
Beef, roasted					to 4 hours	S
Beef, smoked					to 5 hours	
Fish, boiled				 $I_{\frac{1}{2}}$	to $2\frac{1}{2}$ hours	S
Oysters (raw)				 2	hours	
Lamb				 $2\frac{1}{2}$	hours	
Milk				 2	hours	
Mutton, boiled				 3	hours	
Mutton, roasted	1			 3	to $3\frac{1}{2}$ hours	S
Pork, roasted				 5	hours	
Poultry, boiled	or roas	sted		 $2\frac{1}{2}$	to 4 hours	S
Goose, roasted				 4	to 5 hours	S
Tripe				 I	hour	
Veal (as prepai			(sles)	 $4\frac{1}{2}$	hours	
Sweetbread				 2	hours	
Ham, boiled				 2	to 3 hours	S
Eggs, raw				 2	hours	
Eggs, fried or l	boiled b	nard		 3	to $3\frac{1}{2}$ hours	S
Cheese				 3	to 4 hours	S
				 3	to 4 hours	S
Carrots				 3	to $3\frac{1}{2}$ hours	S

Cabbage	• • •			]	21	t o		hama
Turnips				Ì	32	ω	4	hours
Potatoes	• • •				$2\frac{1}{2}$	to	$3^{\frac{1}{2}}$	hours
Rice	)				_		_	
Sago	if comple	etely co	oked	• • •	I	to	2	hours
Tapioca								
Wheaten	bread				2	to	1	hours

The time taken for digestion necessarily varies greatly according to a number of altering conditions which cannot be specified here, and not least upon the degree of sub-division of the food portions effected in mastication. In order to avoid the disadvantages of uncooked or undercooked meats, it is essential that the meats should be sufficiently and properly cooked, but over-cooking appears to retard digestion.

Malt Extract as a Food.—The selection of a malt extract for the use of infants and invalids is an extremely important matter. This has been recognized by the majority of physicians, who carefully indicate 'Kepler' Malt Extract on their prescriptions and diet charts. In view, however, of the many inferior preparations advertised direct to the public under the name of malt extract, it is important that the nurse should make herself acquainted with the characteristics and essentials of the genuine product. She must firmly resist the introduction of all preparations which, although sold by chemists, owe their origin to the confectioner, the brewer, or other makers who have not made a special study of the essential characteristics of a malt extract for medical purposes. These so-called malt extracts are unfitted for use in the sick-room, as they are often merely undesirable alcoholic preparations, or malt-flavoured syrups with no digestive properties. Frequently they are adulterated by the addition of glucose, or are reduced in their value to the sick by the employment, in their manufacture, of cereals other than barley.

'Kepler' Malt Extract is prepared from winter-malted barley only, and contains a high percentage of diastase,

carbohydrates, albuminoids and natural phosphates.

The premier position of 'Kepler' Malt Extract is well recognized by the medical profession throughout the world. The process of manufacture has been brought to perfection by many years of careful experiment and practical experience. All the nutritious principles of the grain are secured, in properly balanced proportions, and the product is at the same time

very active, highly concentrated, and most palatable. 'Kepler' Malt Extract is not only a powerful food but also a digester of foods, and is eminently suited for use as a restorative in exhaustion, sickness and convalescence. It is relished by children and the most fastidious invalids. The high esteem in which the medical profession has always held the 'Kepler' Malt Extract is amply endorsed by the following reports from representative medical journals.

"The 'Kepler' is the best known, and the largest used extract of malt. It is as distinct an advance in therapeutics as was the introduction of cod liver oil."—Lancet.

"We can recommend the 'Kepler' Malt Extract. Being prepared at a very low temperature, its qualities are not deteriorated, nor is its flavour spoiled. It is very favourably spoken of by physicians, both in respect to its nutritive and digestive properties, and as being of a very agreeable flavour."—British Medical Journal.

"Is acknowledged to be the perfection of a concentrated and nutritious food." "It is undoubtedly the best and the

most largely used."

"It is not only unsurpassed but unequalled, and is the extract of malt which every physician prescribes."-Medical Record.

Uses of 'Kepler' Malt Extract.—The great value of the 'Kepler' Malt Extract is due to the presence of all the active ingredients of the finest barley in full proportions, so that it is at once a digestive, a tonic, a nutrient and an alterative. Its diastase renders soluble all starchy substances taken into the stomach, and causes such foods as rice, corn-flour, potatoes, sago, tapioca, etc., to be more assimilable. Its maltose aids digestion, and is restorative and nutritious. Its nitrogenous constituents are compensatory of tissue waste and force-expenditure. Its dextrins are also nutrients, while its phosphates are alteratives and vitalizing foods for brain, bone and nerve. In short, 'Kepler' Malt Extract is a "complete physical food," which contains the

elements necessary to sustain and renew the organism.

Taken by itself, 'Kepler' Malt Extract is administered in quantities of one teaspoonful to one tablespoonful, in water or milk, three times a day, after meals, but it may also be taken

with food as indicated below.

Digestible oatmeal porridge may be made by simply adding a tablespoonful of the 'Kepler' Malt Extract to each plateful

of porridge, and mixing well together. It should not be added, however, until the porridge is cool enough to be eaten, as undue heat destroys the diastatic principles of malt extract. The action of the extract will soon be seen, the porridge becoming more fluid. This dish should always be available for children, as it is not only exceedingly nourishing, but is one well liked by them. In a similar manner, a plateful of sago, tapioca, rice, corn-flour, rolled oats, etc., may be sweetened, pleasantly flavoured, and rendered digestible by the addition of one tablespoonful of 'Kepler' Malt Extract.

Gruel for invalids may also be treated in the same way with advantage. A dessertspoonful of the 'Kepler' Malt Extract added to a soup-plateful of warm gruel will be sufficient to digest the starchy material, and to render the

gruel more nourishing and palatable.

Home-made lemonade, ginger beer, etc., may be pleasantly sweetened and rendered nourishing by the addition of a sufficient quantity of 'Kepler' Malt Extract to produce the desired sweetness. It may also be used to sweeten coffee, tea, chocolate and cocoa, and it imparts to these beverages a nutritive value otherwise absent.

'Kepler' Malt Extract is a safe and useful adjunct to milk during the later periods of infancy. If spread on bread, like honey, children take it with relish. One teaspoonful, gradually increased to a dessertspoonful, may be given to children under ten years of age, twice or thrice daily. Above that age, the dose is from a dessertspoonful to a tablespoonful twice or thrice daily. Its flesh-forming value is soon manifested, and as it contains the phosphates of the grain, which are essential to the production of bone, its continued use does not produce rickets, as is the case with many prepared infants' foods. Administered to nursing mothers, 'Kepler' Malt Extract has a pronounced general nutritive effect, and increases the milk secretion where this is deficient.

A delicious nutritive beverage for those suffering from fever, gastric ulcer, gastric catarrh, or dyspeptic trouble may be made with 'Kepler' Malt Extract and iced aerated water. A little may be given with plain or peptonised milk every 40 minutes when necessary in severe cases of illness.

An excellent strengthening draught is made by stirring up 'Kepler' Malt Extract with brandy or whisky in which peptonised milk, or an egg has been beaten.

The following combinations are also frequently prescribed: 'Kepler' Malt Extract with Phosphates (Malted Chemical Food).

One teaspoonful to one tablespoonful three times daily,

after food, as ordered by the physician.

'Kepler' Malt Extract with Iron, Quinine and

Strychnine (Malted Easton Syrup).

One teaspoonful to one tablespoonful may be taken, in milk or water if desired, three times a day after food, as ordered by the physician.

'Kepler' Malt Extract with Hypophosphites.

One teaspoonful to one tablespoonful may be taken, in milk or water if desired, three times a day after food, as ordered by the physician.

'Kepler' Malt Extract with Hæmoglobin.
This combination of 'Kepler' Malt Extract with the natural iron constituent of the blood, is of special value to nurses suffering from the strain of overwork, or the tension of a serious case. It presents iron in a condition which ensures assimilation without digestive disturbance; thus, while exerting a general nutritive effect on all the tissues, it enriches the blood and vivifies the circulation. It is an ideal preparation for anæmic and debilitated patients, who fail to respond to the treatment ordinarily adopted.

One teaspoonful to one tablespoonful may be taken in milk or water if desired, three times a day, after food, as ordered

by the physician.

Cod Liver Oil as a Food.—There is no nurse who has not had numerous opportunities of watching the gratifying effects resulting from the administration of cod liver oil. As is well known, cod liver oil is not only valuable as a dietetic preparation. It possesses alterative properties of the highest importance, and is much prescribed in a great variety of There are, of course, well-recognized objections to its use, such as its disagreeable flavour and smell, and the difficulty which many invalids and children find in digesting it. Unpleasant eructations commonly follow the administration of cod liver oil and many sensitive patients positively refuse to continue its use. The trouble experienced by nurses in persuading the weakly and the sick to take cod liver oil, or any of the numerous emulsions containing it, for a length of time sufficient to secure the good effects desired by the prescriber, is also a matter of common knowledge.

It is true that some emulsions appear, for the first few doses, to be successful means of administering the oil, but before long the feeling of nausea and the eructations which commonly follow the administration of this fatty food, occur with a severity which is much aggravated by the alkalis and other emulsifying agents used in their preparation. That this should be so cannot be a matter of wonder when it is remembered that the majority of such preparations are really gummy messes or alkaline soaps. In either of these cases the acid juices of the stomach quickly reduce the oil to its original form. The invalid's weakened digestive organs have then to contend not only with the oil, which is itself very difficult of assimilation, but also with the indigestible emulsifying agents employed. This occurs even in cold weather, whilst in the warmer periods of the year the stomachic derangements caused by these unscientific mixtures are still more serious.

The preparation of 'Kepler' Solution is founded entirely upon scientific principles, its basis being the extremely intimate incorporation or solution of the oil in that excellent,

nutritious and digestive food, 'Kepler' Malt Extract.

One of the most brilliant living therapeutic lecturers refers to this solution of cod liver oil in 'Kepler' Malt Extract as comparable to the association of bread with butter. It is obvious that if one were to attempt to eat butter alone, it would speedily cause a feeling of revulsion, although the same quantity spread upon bread would be quite acceptable. An exactly similar happy union is found in 'Kepler' Solution. It is a palatable combination of two valuable forms of food, both of which are rendered appetizing and digestible if taken together.

It is to be remembered that the benefit to be derived from cod liver oil depends entirely upon the quantity absorbed, not upon the quantity swallowed. It is useless, therefore, to continue the administration either of the plain oil or of emulsions when the greater proportion is voided unchanged, and thus wasted. This cannot occur with 'Kepler' Solution, because the association of the 'Kepler' Malt Extract with the

oil is so intimate that complete assimilation is ensured.

The British Medical Journal, in commenting upon this preparation, says: "The 'Kepler' Solution is a great advance on anything hitherto attempted in this direction. . . It is an ideal form for the administration of fat. . . . The taste of the

oil is agreeably disguised, its nutritive qualities are greatly increased, and it is rendered easy of digestion."

The Lancet also reports, "Many can take it easily who cannot take the oil."

Uses of 'Kepler' Solution.—Owing to the extreme palatability of the 'Kepler' Solution, a word of warning is necessary. It is so well liked, both by adult patients and by children, that there may be a tendency to take larger doses than are necessary at the commencement of a course. This should be guarded against by beginning with small doses, and by gradually increasing the quantity as the 'Kepler' Malt Extract establishes a tolerance of the oil in the digestive tract. A teaspoonful or dessertspoonful may be considered sufficient to commence with, this quantity being taken plain, spread on bread, or mixed with milk or water, as preferred. The dose may be gradually increased to one tablespoonful three times a day, after meals.

#### SPECIAL DIETARIES.

The dietetic regimen which accompanies the therapeutic treatment of certain diseases is a matter requiring very careful consideration, and medical men properly insist upon a scrupulous attention to their instructions in this connection.

The following diet lists are such as are commonly ordered, and the request has been made that they be printed here, so that a prescriber may instruct a nurse to adopt such-and-such a dietary for his patient, and thus be spared the dictation of the table of foods, etc.

It cannot be too strongly impressed upon the reader, however, that these dietaries are not intended for use by the nurse on her own responsibility. They are intended solely for use on the instruction of the patient's medical man. As the nurse may at any moment be called upon to use one of these diet tables, she should never neglect to keep this Diary where it can readily be found, and it should always accompany her to a new case.

#### Albuminuria

ALLOWED.—A liberal diet of readily assimilable food. Soups thickened with arrowroot, vermicelli, rice, or barley.

Fish, fowl, pigeon, game, lamb, tripe, sweetbread, calf's head, cow-heel, bacon (in moderation), butter, cream, eggs (in moderation); green vegetables, celery, onions, salads, mushrooms, artichokes, cauliflower, turnips; milk (plain, treated with 'Tabloid' Sodium Citrate, or peptonised), skimmilk, whey, koumiss, milk diluted with rice water or barley water; farinaceous foods, such as bread (stale), toast, rice, tapioca, vermicelli, arrowroot, sago, macaroni; tea, cocoa and coffee (in moderation); soda-water, Seltzer, Vichy (Hauterive), Ems, Vals, Salutaris, plain water (unless hard); in certain cases a little old whisky, freely diluted, or red wine, in small quantity, freely diluted with water or suitable mineral water (see 'Tabloid' Brand Effervescent Mineral Water Salts, page 92).

FORBIDDEN.—Sugar, ices, sweets, pastry and sweet foods generally; new bread, butcher's meats, especially of the brown kinds; beef tea, meat essences and jellies, strong soups; re-cooked meats, stews, hashes; highly-spiced foods, pickles and sauces; rich foods, such as hare, duck, and goose; potatoes, peas, and broad beans, except in great moderation; cheese; every form of alcohol (with the occasional exception of those previously named).

#### Anæmia

ALLOWED.—A full generous diet containing relatively much albumin; soups (unless there be dyspepsia, when the quantity should be very small); Perfected Wyeth Beef Juice; fish; meat of all kinds (except veal and pork), scraped, pounded, or minced, when necessary, and, for preference, underdone; poultry, game, sweetbread, calf's head, tripe; bacon, toasted or well-boiled (never fried); eggs in any form except hard-boiled; all farinaceous foods, including wholemeal bread; 'Kepler' Malt Extract; vegetables of all kinds; all fruits; milk (plain, treated with 'Tabloid' Sodium Citrate, or peptonised), koumiss, whey, cream and butter; red wines, beer, stout, or porter; chalybeate waters and mineral waters generally (see 'Tabloid' Brand Effervescent Mineral Water Salts, page 92); tea, coffee, cocoa. Salt in abundance. Fluids, generally, in abundance.

FORBIDDEN.—Pork, veal, highly-spiced foods, all re-cooked foods, vinegar and pickles.

GENERAL DIRECTIONS.—Meals should be frequent, not at long intervals. Some nourishment—hot or cold milk, with or without a little brandy, or tea made with milk instead of water—should always be given half an hour before rising.

An insufficient quantity of fluid is a very frequent cause of constipation and anæmia. It is a common experience that no remedies help the anæmia so long as the constipation (often its cause) lasts. Anæmic patients should be instructed to take not less than  $2\frac{1}{2}$  to 3 pints of fluid daily.

## Constipation

ALLOWED.—Clear soups; fish; meat of all kinds, except veal or pork; poultry, game, ham, bacon; bread—white, brown, or wholemeal; choose the coarser breads with bran and wholemeal when possible. The bread should be taken in fairly large quantities, and the kinds varied from time to time. It should never be new. The crust also should be eaten. Toast, with plenty of butter or dripping is good. Gingerbread often acts well. Nuts are usually contraindicated, but in some cases Brazil nuts or dry walnuts, well masticated, appear to help. Oatmeal, crushed oats with sugar and milk, or golden syrup, or old-fashioned treacle, cabbage, broccoli, cauliflower, sprouts, French beans, endive, celery, spinach, salads with abundant oil; onions and Spanish onions; apples, stewed or baked; figs, prunes, dates, Normandy pippins, or pears, stewed; oranges, grapes, bananas, strawberries, gooseberries, currants, etc.; jain, marmalade, preserved fruits; 'Kepler' Malt Extract and 'Kepler' Solution; hot or cold water; tea (always freshly made, and never strong nor taken with meat); coffee, thin cocoa; beer, waters, such as Vichy, Vals, St. Galmier, Kissingen, Seltzer, Carlsbad, Marienbad, etc. (effervescent Vichy, Kissengen, Seltzer or Carlsbad draughts can be most conveniently prepared by using the 'Tabloid' Brand Effervescent Mineral Water Salts, see page 92).

FORBIDDEN.—New bread and pastry, eggs, except in moderation and lightly cooked (the best form is 'scrambled' eggs); peas, broad beans, new potatoes, rice, tapioca, etc. (unless with fruit, jam, or honey); nuts of all kinds, usually; milk, except in small quantities or mixed with Vichy or similar water; sherry.

GENERAL DIRECTIONS.—The patient should take a full quantity of fluid—for an adult at least two and a half to three pints daily. This fluid may well include a tumblerful of cold water, or hot water, immediately on getting out of bed in the morning, and a tumblerful of hot water at bedtime. Where hot water, with or without a saline aperient, is ordered to be taken in the morning, the effect is often enhanced if the patient, while dressing, slowly sip the fluid.

No meat with tea; (patient to take fruit, jam, honey or treacle with farinaceous foods, e.g., blancmange or rice), and every night or early morning a full quantity of such fruit as stewed figs, baked apples, Normandy pippins, bananas, etc.

#### Diabetes

ALLOWED.—All clear soups and broths; fish of all kinds—except cod's liver—including shell fish (with plain butter only, melted); meats of all kinds; Perfected Wyeth Beef Juice; eggs in all forms; cream, butter, cheese; gluten, bran, and almond breads and biscuits; greens, spinach, broccoli, turnip-tops, watercress, mushrooms, mustard and cress, cucumber, lettuce, tomatoes, celery (sparingly), endive; French beans, cauliflower, and asparagus (the green part), all in great moderation; strawberries, gooseberries, raspberries, currants, peaches and nectarines, in very small quantity, and occasionally only; oranges and lemons; nuts of all kinds (except chestnuts); pickles, olives, vinegar, oil, jelly (sweetened, if preferred, with 'Saxin'); whipped cream, custards; koumiss, milk in great moderation; tea, coffee, cocoa nibs; 'Saxin' as a sweetening agent; claret, hock, dry Sauterne, Chablis, Burgundy, brandy and whisky; soda water, Apollinaris, Seltzer, Contrexéville, Vichy, Vals, or St. Galmier Waters (effervescent Seltzer or Vichy draughts can be most conveniently prepared by using the 'Tabloid' Brand Effervescent Mineral Water Salts, see page 92). Any alcohol should be ordered in great moderation.

FORBIDDEN.—Sugar and starch in any form; bread and biscuits (unless in small quantity when specially directed); rice, tapioca, sago, vermicelli, arrowroot, cornflour, oatmeal; potatoes, peas, broad beans, parsnips, beetroot, carrots, Spanish onions; pastry and puddings of all kinds; fruits of all kinds, fresh or preserved, except those named (in moderation only); milk, except in small quantity; ale,

stout, porter, port, champagne, liqueurs and cider. No flour should be used in the frying of food for diabetic patients.

#### Diarrhœa

ALLOWED.—Cold milk (boiled for preference), plain, treated with 'Tabloid' Sodium Citrate, or peptonised, alone or with lime water or barley water; koumiss, whey, white wine whey, albumin water, rice water; soups (without vegetables) thickened with arrowroot, rice, sago, or tapioca, and with or without brandy in addition; raw meat, pounded meat, scraped meat, sweetbread, tripe; calf's foot jelly; eggs, lightly boiled or poached, or beaten up with brandy; plain biscuits; rusks, gruels; brandy or port wine; whisky and water, or whisky and a natural mineral water such as Apollinaris or Seltzer.

FORBIDDEN.—Rich soups and meat essences; green vegetables, acid fruits, nuts, potatoes, brown bread, whole-meal bread, all hard foods, or hard meats, or rich, fat meats (especially veal and pork); beef-tea (a fruitful cause of the maintenance of diarrhœa), malt liquors and wines. Broadly, all foods should be avoided which leave a large or irritating residue in the bowel.

GENERAL DIRECTIONS.—The food should be given in small quantities, frequently; it is usually better given cold.

## Dyspepsia

The conditions under which the digestion of food becomes inefficient or difficult are so many, and have such widely varying causes, that no general diet rules can be drawn up. Those foods which are usually found "digestible" and "indigestible" are indicated below, but it is imperative that the opinion of a medical man be taken for each case.

ALLOWED.—Soups (clear, and in very small quantities only, if at all); Perfected Wyeth Beef Juice; fish, boiled (except mackerel, salmon, crab, lobster, anchovies and eel); chicken, fowl, pigeon, game (not "high"), lamb, mutton, beef (roasted); toasted or well-boiled ham and bacon (never fried); eggs, poached or lightly boiled; tripe, sweetbread, cow-heel, calf's head; dry toast, carefully prepared, or (better) plain rusks; stale bread; other farinaceous foods

with caution and in moderation only; 'Kepler' Malt Extract; potatoes (with caution), spinach, green vegetables generally in small quantity only; celery, French beans, vegetable marrow; fruit (without pips, core or skin) in small quantity; 'Kepler' Malt Extract; milk, plain, treated with 'Tabloid' Sodium Citrate, peptonised, or diluted with Vichy, Vals, or Seltzer (see 'Tabloid' Brand Effervescent Mineral Water Salts, page 92); butter in moderation; koumiss, hot or cold water; tea (freshly made, not strong); coffee, in moderate quantity and not strong; thin cocoa; stimulants, when considered necessary, should be expressly ordered for each case.

FORBIDDEN.—New bread, wholemeal bread (usually), muffins, crumpets, buttered toast, pastry and sweets generally; hard long-fibred meats, veal, pork, and beef; sauces; curries; pickles and condiments; all fried or re-cooked meats; all salted, cured, tinned, preserved and highly-seasoned fish and meat; sausages, liver, kidneys, duck, goose and eels; green vegetables generally, save in small quantities for those whom they are known to suit; soups and broths (except in small quantity); foods generally which leave a large residue or which are in their nature irritating (discard seeds, kernels, rinds, skins and stalks); acid or unripe fruits; sour wines; tea with meat; usually coffee, chocolate, lemonade and ginger beer. Tea should be avoided altogether, unless of moderate strength and freshly infused.

GENERAL DIRECTIONS.—All food should be eaten slowly and completely masticated.

Meals should be taken at regular hours (arranged for each case), and when possible in pleasant company, without haste, and under conditions free from hurry or worry or excitement. Each meal should be followed by a period of rest.

All food should be so cooked and served as to stimulate appetite and digestion.

Where tea, coffee, tobacco and stimulants are allowed, explicit instructions are usually given as to the kind and quantity, and when and how they should be consumed. For example, freshly-made tea and mild tobacco may be good, when "stewed" strong tea and strong tobacco would be bad.

Air, exercise, and care as to the bowels are most necessary for patients suffering from dyspepsia.

#### Gout

ALLOWED.—All fresh vegetables freely (with exceptions named); fish (with exceptions named); eggs in moderation, lightly boiled or poached; meats (those of the lighter and whiter kinds) in great moderation; rice, sago, and tapioca; fresh ripe fruits (with exceptions named); vegetable soups; toast or stale bread; potatoes, salads, celery, and green vegetables (with exceptions named); milk (skimmed), diluted with Apollinaris, Vals, Vichy, or Seltzer water (see 'Tabloid' Brand Effervescent Mineral Water Salts, page 92); lime-juice, freely diluted; China tea (freshly infused and not strong); coffee, which should be taken only in moderation, and not at night; cocoa; tobacco in moderation.

In small quantities only—Bread, plain biscuits, butter and cheese, potatoes, asparagus, tomatoes, haricot beans, broad beans, peas and lentils; eggs; whisky or brandy, not to exceed two ounces in the twelve hours; unsweetened gin, claret, or hock, freely diluted.

FORBIDDEN.—Fats and rich foods, re-cooked foods, sauces, rich gravies, and made dishes; the harder or richer meats, beef, pork, or veal (as cooked in the British Isles); smoked, dried or pickled fish, pork, or other meat; pastry, jellies, sugar; meat essences and strong soups; rhubarb, gooseberries, currants; strawberries, except in moderation; oysters, mullet, mackerel, salmon, herring, eel, lobster, crab; duck, goose, hare, mushrooms, truffles, pickles and spices; preserved fruits; ale, porter, stout, port (usually); champagne (nearly always); Burgundy, sherry, Madeira and all liqueurs.

GENERAL DIRECTIONS.—Moderation in animal food, liberality in vegetables. The proportion of these will be indicated by the medical man for each case.

Abundant fluid, of which plain hot water (for preference slowly sipped), night and morning, may form a large proportion.

## Obesity

ALLOWED.—Clear soups in small quantity only; broths, not thickened nor containing such ingredients as rice or barley; fish and lean meat (with exceptions named); eggs; fruit; green vegetables; stale bread, toast, rusks and biscuits in great moderation, or gluten and almond bread or biscuits;

butter; water (hot or cold); milk (skimmed), diluted with Vichy, Vals, Seltzer, or other water (see 'Tabloid' Brand Effervescent Mineral Water Salts, page 92); tea or coffee, with 'Saxin' instead of sugar; natural mineral waters, claret, hock, Chablis, whisky, or brandy, in moderation.

FORBIDDEN.—Thick soups; eels, mackerel, salmon, herrings, sardines with oil; pork, duck, goose; rice, tapioca, macaroni, oatmeal, sago, arrowroot; potatoes, peas, broad beans, parsnips, carrots, beetroot; pastry and sweets; sugar, starchy cocoas; cream and milk (except in great moderation); ale, porter, stout, port, champagne and liqueurs.

#### Phthisis

The diet as to quantity and quality, and as to time and frequency and method of administration, must necessarily vary widely according to the stage of the disease and the condition of the appetite and of the digestion.

ALLOWED.—All soups, broths, meat essences and juices, Perfected Wyeth Beef Juice; eggs, preferably raw; fish, poultry, game; meat, scraped, pounded, or minced, when necessary; all vegetables in moderate quantities; all fruits; milk, koumiss, cream, tea, coffee, cocoa, chocolate; alkaline mineral waters (see page 92); beer, wine, or spirit (as required for each case); 'Kepler' Malt Extract; 'Kepler' Solution.

FORBIDDEN.—Veal, pork, hard or salt meat, re-cooked foods, and pickles.

GENERAL DIRECTIONS.—The method of feeding in phthisis is as important as the quantity and quality of the food. All food should be appetizingly cooked and daintily served, and its consumption encouraged unless there is temporary indication of digestive disturbance. The greatest variation possible, even in the matter of serving milk, should be introduced.

- A. On waking, milk, hot or warm, gradually increasing in quantity till ten to twelve ounces are taken. It may contain a little sodium phosphate to help the bowels, or sodium bicarbonate or sodium citrate to render it more easy of digestion.
- B. If preferred, there may be given as a morning stimulant a breakfastcupful of tea made with milk instead of water.

- C. Breakfast, one hour later, should be substantial, and is better taken in bed before washing and dressing.
- D. One hour and a half after breakfast (so as not to spoil the appetite for luncheon), one raw egg, or two if possible, broken into a glass and swallowed whole, with pepper and salt, or beaten up with a little milk; or raw meat, alone or in sandwich; or Perfected Wyeth Beef Juice.
- E. Mid-day, a substantial meal with (when indicated) beer, red wine, or spirit.
- F. One hour and a half after luncheon, milk or raw eggs, or raw meat.
- G. In the afternoon, tea made with milk, or milk, with raw eggs, or raw meat, and abundant bread and butter.
- H. At 7 or 7.30, a substantial meal.
  - I. At bedtime, milk, and if possible a raw egg in it, or with it.

Note.—The three substantial meals of the day may suitably be followed by a dose of 'Kepler' Solution proportionate to the age and condition of the patient.

## Rheumatism (Acute)

ALLOWED.—I. During the stage of fever and joint inflammation: Fluids only, milk, treated with 'Tabloid' Sodium Citrate, diluted with soda water or lime water, or peptonised; Benger's Food, Plasmon, Somatose, fruit jellies, thin oatmeal gruel, barley water, fresh lemonade, 'Kepler' Malt Extract; weak China tea. The patient may be allowed to partake freely of a drink prepared by mixing a pint of milk with a pint of boiled water, adding 30 to 40 grains of sodium bicarbonate and 10 to 20 grains of common salt, and cooling with a lump of ice.

- II. After the febrile stage is over: Light clear soups and broths flavoured with fresh vegetables and herbs, with a little pounded chicken, light puddings, and bread and milk.
- III. Ten to fourteen days after the temperature is normal: Bread and butter, eggs, white fish, chicken, pounded lean meat, mutton, veal; stewed celery, mashed potatoes, spinach, sea-kale, asparagus and pulp of fresh fruit.

FORBIDDEN IN ALL STAGES.—Beef tea, meat extracts, pastry, sugar, sweets and alcohol. Occasionally a little red wine is allowed in convalescence.

## Typhoid Fever

I. During the febrile stage: Fluids only, consisting chiefly of milk, of which at least three pints should be taken in the twenty-four hours. The feeds should be given every two hours, one or two feeds being omitted during the night if the patient be asleep. The milk may be peptonised, treated with 'Tabloid' Sodium Citrate, diluted with water, soda water, lime water, barley water, or rice water. Arrowroot, cornflour, or Benger's Food may be used to thicken it. Isinglass may be added so as to make a milk jelly. Tea, coffee, chocolate, vanilla, cinnamon, almond, or lemon may be added as flavouring agents. When the milk is not digested, or tympanites is present, whey may be substituted.

To vary the milk feeds, meat juices may be given, such as Perfected Wyeth Beef Juice, beef tea, chicken broth, strained mutton broth, clear soups, raw meat juice, and calf's foot jelly. Albumin water, made by beating up the whites of two eggs with half a pint of water, and adding sugar and lemon and ice, makes a pleasant and nutritious drink. Whisky or brandy may be given when necessary.

II. After the temperature has been normal for ten to fourteen days, solids may be gradually added, beginning with bread and milk, baked custard, and thin bread and butter; and later, boiled sole, minced chicken or lamb, boiled chicken, roast chicken, roast lamb and chops.

All foods given in typhoid fever should be so dilute as to remain liquid in the intestines. Milk may with advantage be diluted with twice the quantity of water. Pure water may be given without stint and with advantage.

The strictly fluid diet, mainly milk, hitherto usually ordered in typhoid fever, is now considered by many physicians unduly and unnecessarily restrictive. A more abundant diet (including bread, gruel, boiled eggs, milk, meat, chicken soup and milk pudding) is often ordered. It is claimed that the results are so good as at least to raise the suspicion that the strict orthodox diet may in some cases be unnecessarily severe.

#### THE PERFECTED

## WYETH BEEF JUICE

Contains all the nutritive albuminous principles of prime beef and presents its hæmoglobin unaltered.

Wyeth Beef Juice is a restorative food of supreme service during crises in illness, in febrile diseases, during convalescence and in muscular or nervous prostration.

As a pick-me-up and restorative for the tired nurse during periods of strain it is ideal.

Wyeth Beef Juice may be given with cold water, cold milk or aerated water. It should never be mixed with hot fluids, as heat coagulates its albuminous constituents.

# THE FEEDING OF INFANTS AND CHILDREN

If the mother be healthy, the infant's sole nourishment for the first seven or eight months of its life should be the mother's milk, which forms the only perfect food for the child at this time.

For the first six weeks of its life, the infant should receive nourishment every second hour from 5 a.m. till 11 p.m., and should be removed from the breast whenever it shows any inclination to stop sucking. During the second month, feeding every three hours is generally sufficient, and from this time, up till eight months, the intervals should be three to four hours. After the seventh or eighth month, other foods may be introduced at some of the feedings, and between the tenth and twelfth months the child should gradually be weaned.

Should the mother be unable to suckle the child, a young and healthy wet-nurse may be obtained, or the infant may be reared on substitute foods.

If it be decided to employ artificial foods, the milk of the cow, ass and goat, and condensed milk have been proposed as substitutes for that of the mother, whilst many prepared foods for infants are supplied, which usually contain starchy matter in a readily assimilable form, as well as some malt preparation. 'The so-called "infants' foods" usually contain some malted farinaceous substance, and they are of value as additions to, not as substitutes for, milk.' Ordinary farinaceous foods, such as arrowroot, are never admissible before the fourth month, and rarely advisable until after the seventh.

Cow's milk is generally selected as a substitute for the mother's. The following table shows their average composition:—

				Human Milk.	Cow's Milk.
Water		• • •		87.163	87.012
Fat	• • •	• • •		4.283	4.209
Casein	• • •		• • •	1.046	3.222
Milk-Sugar	•	• • •	• • • •	7.407	5.000
Ash	• • •	•••	•••	.101	·527
			- 1		

Not only does cow's milk differ in chemical composition from that of the mother, but it is distinguished also by its physical properties. Cow's milk, therefore, must be modified in order to make it a fit substitute for human milk.

Human milk is poorer in casein, but contains more lactalbumin. By diluting cow's milk with water, the proportion of casein can be reduced to its proper level, whilst the addition of cream and milk-sugar (lactose) gives the cow's milk its proper amount of fat and sugar. The water for dilution should be boiled, and it is still better to use very thin barley water or decoction of arrowroot (one drachm to one pint); this prevents

the curds formed from being too large.

It is preferable to sterilise the milk itself. This is best done in a proper milk steriliser; failing which, heating the milk to the boiling point and then cooling rapidly is the method employed. Pasteurization of milk consists in keeping it for at least twenty minutes at a temperature of 150°-160° F. (60°-65.6° C.). This process is found to destroy pathogenic microbes, and it is claimed that the natural taste and quality of the milk are retained. Some authorities state that cow's milk efficiently sterilised is best given undiluted, as hard curds are not formed in the stomach, and the infants gain weight more rapidly on undiluted than on diluted milk.

Dilution.—This is the general practice. Provided the milk has not previously been watered, the proportions for infants at various ages may be taken as follows:—

4 ( (01.11)		Proportions of				
Age of Child.		Milk	Water			
Up to 1 month CTO From 1 to 3 months From 3 to 4 months GTO From 4 to 5 months		I I I	2 I 1 1 3			

From the fifth or sixth month onward the milk may be given undiluted.

Sugar,—Add 60 grains, preferably milk-sugar (lactose), to every four ounces of diluted milk.

Fat.—Add one dessertspoonful of cream to every four ounces of diluted milk.

The amount of cow's milk to be given and other particulars are summarized in the following table:—

m Age.	Number of feedings in twenty- four hours	between meals	feedings (10 p.m	Quantity for one feeding	Quantity for twenty- four hours
		Hours		Ounces	Ounces
3rd to 7th day	1	2	2	II\frac{1}{2}	10-15
2nd and 3rd weeks		2	2	112-3	15-30
4th and 5th weeks		$2\frac{1}{2}$	T	$2\frac{1}{2}$ $-3\frac{1}{2}$	22-32
6th week to 3rd month	8	$2\frac{1}{2}$	I	$3^{-4\frac{1}{2}}$	2436
3rd to 5th month	1 * *	3	I	$4 - 5\frac{1}{2}$	2838
5th to 9th month	.  6	3.	0	5 2 7	33-42
9th to 12th month	5	3 5	0	729	37—45

Peptogenic Milk Powder may be employed to modify cow's milk, so that it conforms remarkably in every particular to normal mother's milk and affords a substitute for the latter during the entire nursing period. Recently, considerable attention has been directed to the treatment of cow's milk by the addition to it of sodium citrate. Undiluted cow's milk, to each ounce of which one to two grains of this salt have been added, is found to produce in the child's stomach a light flocculent, finely-divided clot, which is easily digested. The method has given great satisfaction in cases where vomiting, diarrhea, griping and emaciation followed the use of milk and other foods, whilst it is a valuable assistance during the process of weaning. The anti-scorbutic power of sodium citrate, its harmlessness to the child, and its extreme solubility, are additional arguments in favour of its use. 'Tabloid' Sodium Citrate, gr. 2, dissolved in a teaspoonful of water, is added to each ounce of milk. The simplicity of the method enables the nurse to carry out quickly and easily the treatment of the milk, and with the 'Tabloid' product she conveniently obtains the exact amount of the salt to be employed for each feed.

Between the ages of twelve and eighteen months, the child should have five meals in the day: at 6 a.m., milk and a plain biscuit; at 8 a.m., bread and milk, or porridge and milk; at noon, mashed potato and gravy or broth, milk pudding, egg custard, milk and barley water; at 4 p.m., bread and butter, the yolk of a lightly-boiled egg, or bread and milk; at bedtime, milk and a biscuit.

After eighteen months, in addition to the above diet, there may be added to the mid-day meal under-cooked mince with finely-chopped greens, or plain boiled fish and potatoes. At

tea-time, a little cocoa may be added.

#### DENTITION TABLE

The following tables show the order in which the milk teeth and the permanent teeth appear, and the average age at their eruption. There are, of course, wide limits as to time, and, though less often, irregularity in the order of their appearance.

Milk Teeth.—The first dentition begins at the sixth or seventh month, and is completed by about the second year.

The full primary dentition is 20 teeth: 10 in each jaw.

#### Permanent Teeth .-

First molars $6\frac{1}{2}$ years	Second bicuspid 11 years
Lower central incisors, 7 ,,	Canines 12 ,,
Upper ,, ,, 8 ,,	Second molars 13 ,,
Lateral incisors 9 ,,	Third molars (wisdom) 17 to 25
First bicuspid,	years, or at any later period

The full permanent dentition is 32 teeth: 16 in each jaw.

## AVERAGE WEIGHTS AND HEIGHTS

The following tables give the average weights and heights of males and females at different ages. It must be borne in mind that these averages are calculated from a number of tables of the weights and heights of a large number of persons, and, though accurate as a general guide, are not necessarily true for each person. Having regard to the widely varying range in the height and weight of healthy people, it is obvious that the individual may not conform to such average standard, and a deviation of 15 per cent. in either direction from such standard is not seriously regarded. Of more importance than the actual weight is the proportion between height and weight. Great care should be taken that patients who are being weighed periodically should always be weighed on the same or reliable scales, and under precisely corresponding conditions (so far as possible) of clothing, food, etc., etc.

TABLE A.—Average weight of the healthy male child during the first year of life:—

<b>J</b>				lb.					lb.
Weight a	at birth	•••	•••	6.8	Weight a	t seven m	onth	S	13.4
,,	one m		• • •	7.4	,,	eight		•••	
,,	two m		• • •	8.4	,,	nine	"	•••	15.8
,,	three	,,	***	9.6	,,	ten	,,	• • •	16.8
,,	four	,,	•••	10·8	,,	eleven	,,	• • •	17.8
,,	five	,,	•••	11.8	,,	twelve	,,	•••	18.8
,,	six	,,		12.4					

Table B.—Average height, without shoes, and average weight, with clothes, of all classes (town and country) of the general population of Great Britain, from the Report of the Anthropometric Committee, 1883. This Table shows some facts uniformly observed, but not sufficiently borne in mind. (1) Growth is most rapid during the first five years of life, the rate of growth being about the same in both sexes, girls being a little shorter and lighter than boys. (2) From 5 to 10, boys grow more rapidly than girls. (3) From 10 to 15, girls grow more rapidly than boys. Between 11½ and 14½ they are actually taller, and from 12½ to 15½ actually heavier than boys. (4) From 15 to 20, boys begin again to increase more rapidly than girls, and complete their growth at about 23. (5) After 15, girls grow more slowly, and practically reach their full height and weight at 20. During childhood and adolescence, increase in weight is more marked in the winter, and increase in height in the summer.

	Males			Females	
Age last birthday	Height ft. in.	Weight st. lb.	Age last birthday	Height ft. in.	Weight st. lb.
birthday  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	ft. in.  2 $5\frac{1}{2}$ 2 $8\frac{1}{2}$ 2 $1$ 3 $1$ 3 $4$ 3 $7$ 3 $10$ 3 $1$ 4 $1\frac{5}{4}$ 4 $7$ 4 $9$ 4 $1\frac{1}{4}$ 5 $6\frac{1}{4}$ 5 $7\frac{1}{2}$ 5 $7\frac{1}{2}$ 5 $7\frac{1}{2}$	st. lb.  1 $4^{\frac{1}{2}}$ 2 $4^{\frac{1}{2}}$ 2 $6$ 2 $9$ 2 $12$ 3 $2^{\frac{1}{2}}$ 3 $7^{\frac{\pi}{4}}$ 3 $13$ 4 $4^{\frac{1}{2}}$ 5 $2$ 5 $6^{\frac{\pi}{4}}$ 6 $8$ 7 $4^{\frac{\pi}{4}}$ 8 $7$ 9 $5$ 10 $3^{\frac{1}{4}}$ 10 $5$ 10 $7$	birthday  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	ft. in.  2	st. lb.    1
23 24 25-30 31-35	5 7 1 1 2 1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1	10 $7\frac{1}{2}$ 10 8 10 $12\frac{1}{4}$ 11 6	23 24 25-30 31-35	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	8 12 8 9 8 8 8 9

TABLE C.—Average weight for height, with average chest measurement, of a man aged 30:—

						Chest							Chest
He	ight		Wei	ght	Circ	umference	He	ight		Wei	ght	Circ	umference
ft.	in.		st.	lb.		in.	ft.	in.		st.	lb.		in.
						$33\frac{1}{2}$	5	7		10	8		38
5	I		8	4	***	34	5	8		ΙI	I	• • •	$38\frac{1}{2}$
5	2	• • •	9	0	• • •	35.	5	9		ΙI	8		39.
5	3	• • •	9	7	• • •	35 <sup>1</sup> / <sub>2</sub>	_	IO			_		
5	4	• • •	9	13	• • •	36	5	ΙI	• • •	12	6	•	40
0	5					37	_	O					
5	6		10	5		37 ½	6	I		13	0		4 I

The average weight of the clothing is  $\frac{1}{24}$ th of the male body.

Table D.—Average weight for height of a woman, dressed, measuring: -

He	ight		We	ight		Hei	ght		We	ight	He	ight		We	ight
ft.	in.		St.	lb.	-	ft.	in.		st.	lb.	ft.	in.		st.	lb.
4	10		7	O		5	2		8	2	5	6		9	13
4	ΙI		7	4		5	3	• • •	8	9	5	7		10	8
5	О		7	7		5	4	• • •	9	2	5	8	• • •	ΙΙ	4
5	I	• • •	7	12		5	5	• • •	9	9					

The average weight of the clothing is to the female body.

## TABLE OF INCOME

Per	Per	Per	Per	Per	Per	Per	Per
Year	Month	Week	Day	Year	Month	Week	Day
£ s. 0 10 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 0 10 10 11 0 11 11 12 0 13 13	£ s. d. 0 0 10 0 1 8 0 3 4 0 5 0 0 6 8 0 8 4 0 10 0 0 11 8 0 13 4 0 15 0 0 16 8 0 17 6 0 18 4 0 19 3 1 0 0 1 1 8 1 2 9	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	S. $a'$ .  O. $a_{\frac{1}{4}}$ O. $a_{\frac{1}{$	400 0	£ s. d.  1 3 4 1 4 6 1 5 0 1 6 3 1 13 4 2 10 0 3 6 8 4 3 4 5 0 0 5 16 8 6 13 4 7 10 0 8 6 8 16 13 4 25 0 0 33 6 8 41 13 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	£ s. d.  0 0 $9\frac{1}{4}$ 0 0 $9\frac{1}{4}$ 0 0 $9\frac{1}{4}$ 0 0 $10\frac{1}{4}$ 0 1 $1\frac{1}{4}$ 0 2 $2\frac{1}{4}$ 0 2 $9$ 0 3 $10$ 0 4 $1\frac{1}{4}$ 0 5 $5\frac{1}{4}$ 0 10 $11\frac{1}{4}$ 1 1 1 1 1 7 $4\frac{3}{4}$

#### UTERO-GESTATION

There are wide differences in the figures given by various authorities on the points dealt with in this section. Those given below are believed to be in accord with present English teaching.

#### FŒTUS

Length and weight at different stages of intra-uterine life Days Weeks Length to 6 28 4 lines gr. 20 4 8 15 to 18 56 dr. 2 to 5 ,, 84 2 to inches I to 2 oz. 12 3 2 to 3 oz. 112 16 3 to 6 ,, 6 to 8 5 to 7 oz. 140 20 ,, 8 168 ı lb. 24 to 10 28 2 to 3 lb. 196 10 to 13 224 32 13 to 15½ 3 to 5 lb. 36  $15\frac{1}{2}$  to 18 252 6 to 9 lb. 280 18 to  $20^{\frac{1}{2}}$ 40 ,, or more

It has been calculated that the length of the feetus for the first six months of intra-uterine life is indicated in centimetres by the square of the number of the corresponding month. Thus, at one month, a fœtus measures 1 centimetre; at 2 months, 4 centimetres; at 3 months, 9 centimetres; at 4 months, 16 centimetres. The variation in the length and weight of children at birth is very great. The average weight at birth is stated to be 6.8 lb., but English experience would place it somewhat higher—possibly 7½ lb. for a full-term infant.

#### FŒTAL HEART SOUNDS

The sounds of the fœtal heart, 130 to 150 per minute, are best heard, at the end of the fourth, or beginning of the fifth month, at a point midway between the umbilicus and the left (or, less frequently, the right) anterior superior spine of the ilium.

#### FŒTAL HEAD

Measurements at full term

1. Sagittal diameters—

(a) The direct, or fronto-occipital (from the glabella to the most prominent point of the occiput), 4.5 inches, with a circumference of 13.5 inches.

(b) The great diagonal, or mento-occipital (from the point of the chin to the most prominent point of the occiput), 5.25 inches,

with a circumference of 14.25 inches.

(c) The small diagonal, or sub-occipito bregmatic (from a point midway between the occipital tubercles and the foramen magnum to the posterior edge of the great fontanelle), 3.75 inches, with a circumference of 11.5 inches.

2. Transverse diameters—

(a) The great transverse, between the most prominent points of the two parietal eminences, 3.75 inches.

(b) The small transverse, or bitemporal, 3 inches.

3. Vertical diameters—

(a) From the vertex to the base of the skull—i.e., to the anterior edge of the foramen magnum, 3.75 inches.

(b) From the most projecting part of the forehead to the chin-

i.e., the length of the face, 3 inches.

#### FEMALE PELVIS

#### Measurements

					Inlet	Cavity	Outlet
Antero-post	terior	(true	conjug	rate)	$4^{\frac{1}{4}}$ in.	$4\frac{1}{2}$ in.	5 in.
Oblique					$4^{\frac{1}{2}}$ in.	$4^{\frac{1}{2}}$ in.	$4^{\frac{1}{2}}$ in.
Transverse			• • •	• • •	5 in.	$4^{\frac{1}{2}}$ in.	4 in.

The external conjugate, usually known as D. B., the diameter of Baudelocque, measured from the first spine of the sacrum to the mons veneris, is  $7\frac{1}{2}$  to eight inches.

The "measurement of the spine" between the external margins of the anterior superior spinous processes of the ilia, is usually about 10 inches.

The measurement between the most distant parts of the crests of the

ilia is usually about 11 inches.

The diagonal conjugate, measured from the promontory of the sacrum to the under surface of the symphysis pubis, is about  $4\frac{1}{2}$  inches.

#### GRAVID UTERUS

Position of fundus at the different stages of pregnancy

End of 2nd month  $1\frac{1}{2}$  in. above symphysis pubis

- 3rd midway between symphysis and umbilicus  $\frac{2}{3}$  of distance between symphysis and umbilicus 4th
- level with umbilicus 5th
- 6th I in. to  $1\frac{1}{2}$  in. above umbilicus ,, ,,  $2\frac{1}{2}$  in. to 3 in. above umbilicus 7th ,,
- $\frac{2}{3}$  of distance between umbilicus and ensiform " cartilage

Thence it continues to rise slightly towards the ensiform cartilage until the last week of pregnancy, when it begins to sink again, in consequence, chiefly, of the fœtus descending more into the pelvis.

#### GRAVID UTERUS

Measurements at different stages of pregnancy

		Length	Width	Depth
At end of	3rd month	$4\frac{1}{2}$ to 5 inches	4 inches	3 inches
,,	4th ,,	$5\frac{1}{2}$ to 6 ,,	5 , ,,	4 ,,
,,	5th ,,	6 to 7 ,,	$5\frac{1}{2}$ ,,	5 ,,
,,	6th ,,	8 to 9 ,,	$6\frac{1}{2}$ ,,	6 ,,
,,	7th ,,	10 to 11 ,,	$7^{\frac{1}{2}}$ ,,	$6\frac{1}{2}$ ,,
,,	8th ,,	II to 12 ,,	8, ,,	7 ,,
,,	9th ,,	12 to 14 ,,	$9^{\frac{1}{2}}$ ,,	8 to 9 in.

#### NON-GRAVID UTERUS

Measurements in Nulliparæ

Length from fundus to anterior lip	 	$3\frac{1}{4}$ in.
Width at fundus	 	
Depth immediately below fundus	 	$\frac{3}{4}$ in. to $1\frac{1}{4}$ in.

The cervix is  $1\frac{1}{4}$  to  $1\frac{1}{2}$  in. long, 1 in. wide, and  $\frac{1}{2}$  in. to  $\frac{3}{4}$  in. deep.

The anterior lip projects 0.2 in. to 0.3 in. beyond the 0s, while the posterior measures from the fornix to its free edge 0.7 in.

The walls are 0.4 in. to 0.6 in. thick in virgins, and 0.8 in. in women

who have had children.

The weight in virgins is 1.1 oz. to 1.3 oz.; and in women who have borne children, 3.3 oz. to 4 oz.

#### LEGAL INFORMATION

Infectious Diseases.—Very often a private or district nurse is expected to possess information which she has had neither the need nor the opportunity of acquiring during her hospital career. For instance, with regard to infectious cases, her experience is often very limited. When a patient in a general ward is found to be suffering from one of the infectious fevers, the physician orders his immediate removal, and the proper officials carry the matter through. The nurse has no responsibility beyond seeing that bedstead, floor and locker are properly disinfected, and the bedding and linen sent, with due precautions, to be "stoved." If she has never worked in a fever hospital, she cannot, even in imagination, follow her late patient through the formalities of transport, examination and admittance.

But in a district or private practice, a nurse has no staff of officers to rely upon, and she should make herself acquainted with the laws framed from time to time for the protection of public health, and thus be prepared to understand orders, as well as to follow out the details from which such important consequences may result.

In London and all districts in which the Notification Act has been adopted, it is compulsory that the infectious diseases specified below be immediately reported to the medical officer of health for the district:—

- (1) By the head of the household or his representative;
- (2) By the doctor who has seen the patient.

A certificate signed by a qualified medical practitioner can procure the removal to a fever hospital, or to the isolation ward of a general hospital, of a person suffering from infectious disease if he has no proper lodging. The expense of the transport is borne by the local authority, which can also make compensation for clothing or bedding injured unnecessarily by disinfection, or destroyed by order of the authority.

If the friends of a patient refuse to permit a removal which is considered by the medical officer of health to be necessary for the protection of the public, an order for compulsory removal can be obtained from a magistrate; but should the entrance of officers to carry out the order be resisted, they are instructed not to use force, but to content themselves with taking out a summons. Nurses can often induce those

with whom they are brought into contact to take due sanitary precautions by explaining both the need for them, and also that certain laws exist to enforce them. Amongst the poor it is frequently the district nurse who first discovers, or is told casually, that some of her neighbours are attacked by an infectious disease. Probably no doctor has been called, and the parents are reticent lest their employers, as well as the school authorities, may insist on inconvenient isolation. However much the nurse may sympathize with the poor people, to whom temporary suspension from work is a serious matter, her own duty is plain. She must place the facts before the medical officer of health, and leave the matter to him.

Notifiable Diseases.—The infectious diseases notifiable are small-pox, cholera, diphtheria, membranous croup, erysipelas (traumatic or idiopathic), scarlatina, typhus, typhoid (enteric), relapsing, continued, or puerperal fevers. We may here mention that the Local Government Board order of September 19, 1900, in relation to the notification

of cases of plague, has not been withdrawn.

According to the opinion of a well-known physician, "any continued fever occurring in a lying-in woman, attributable to absorption of septic matter from some part of the genital tract, should be considered as coming within the definition" of puerperal fever. Under special conditions, the local authorities have the power of adding to the above list of notifiable diseases—measles, mumps, whooping cough,

chicken-pox, etc. In London, these have been added.

It is important to remember that the law applies to every place in which people live; therefore no immunity from notification may be claimed on behalf of those living in ships, boats, sheds, vans, or tents. It is well, also, to note that the exposure of infected persons in public places is illegal. Not only is the person suffering from a dangerous (i.e., notifiable) disease subject to a penalty, but those in charge of him may also be fined if they permit him to enter shops, inns, public conveyances, or any place of public resort.

Disinfection of Houses.—The disinfection of houses may be undertaken by the occupiers, provided they satisfy the medical officer of health as to the completeness of the process, and also carry it out within the prescribed limit of time. It is usual in many districts for the actual disinfection to be performed by the local sanitary authority, and the subsequent cleansing by the householder. Anyone who

vacates a house wherein a case of infectious disease has occurred within six weeks, without duly disinfecting it, or informing the landlord of the recent illness, is liable to a heavy penalty. It is unlawful for dust or rubbish from an infected room to be thrown into a dustbin without previous disinfection. If a request be made by the occupier, the sanitary officer provides for its removal and destruction. Free disinfection is provided, at disinfection stations in London and most of the large towns, for articles which have been in contact with both notifiable and unnotifiable infectious diseases.

Disinfection of the Person should, of course, in all cases be very carefully observed before leaving the house of a patient suffering from an infectious disease, and proceeding either to another patient, or to mingle with the public. Failure to observe proper and reasonable precautions is a serious act of negligence, and any person who could prove that infection had been carried to him or his family could bring an action for damages, and the person so acting carelessly and with disregard to other persons' safety, would have to pay not only the damages, but also the costs. If the person infected by reason of such negligence died, and the negligence were of a reckless character, the person carrying the infection might possibly be indicted for manslaughter. It is incumbent upon all persons, but especially upon nurses who come in contact with patients suffering from infectious diseases, and particularly puerperal fever, to take the greatest possible pains to avoid conveying the disease to healthy persons.

Removal to Union Infirmary can be secured in cases of destitution by obtaining an order from the Relieving Officer, who will not, however, give such an order unless the application is supported by a medical certificate. For admission to the workhouse only, no medical certificate is necessary.

Removal of Infectious Cases.—Anyone who uses an ordinary vehicle for the conveyance of an infected person, without previously informing the driver of the purpose for which such vehicle is required, is liable to a penalty; and a driver who fails to have his vehicle disinfected after it has thus been used is also liable. It is illegal for a person suffering from a notifiable disease to enter a public conveyance. Outside the

metropolitan area, direct instructions must be obtained from the medical officer of health, or his representative, with regard to the conveyance to be used for the removal of infected persons.

Medical officers of health and sanitary inspectors are generally willing to instruct a nurse as to the methods followed in their own districts, being naturally glad to find that their orders will be intelligently followed, and their efforts to prevent epidemics consistently seconded.

Ambulances.—The ambulances of the Metropolitan Asylums Board are for infectious cases only. Applications to be made between 9 a.m. and II p.m. to the Chief Office (Ambulance Department), Victoria Embankment (corner of Carmelite Street), E.C. Telegraphic Address: Asylums Board, London; Telephone Numbers: 2461 Holborn and 7181 Central. Applications in the latter part of the day must be despatched in time to reach the office before II p.m. Between II p.m. and 9 a.m. applications must be made direct to the ambulance stations as follows:—

Eastern Ambulance Station, Brooksby's Walk, Homerton, N.E., Telephone No. 2461 Holborn; North Western Ambulance Station, Lawn Road, Fleet Road, Hampstead, N.W. (near Hampstead Heath Railway Station), Telephone No. 2462 Holborn; Western Ambulance Station, Seagrave Road, Fulham, S.W. (near West Brompton Railway Station), Telephone No. 2464 Holborn; South Western Ambulance Station, Landor Road, Stockwell, S.W. (near Clapham Road Railway Station), Telephone No. 2463 Holborn; South Eastern Ambulance Station, New Cross Road, S.E. (near Old Kent Road Railway Station), Telephone No. 7181 Central; Brook Ambulance Station, Shooter's Hill, Kent, Telephone No. 2465 Holborn.

The use of an ambulance can be secured for patients suffering from infectious disease, whether they are going to one of the M. A. B. hospitals or elsewhere. In the former case there is no charge, in the latter a charge of 5/- is made (increased if outside the Metropolitan area). If a nurse be desired to accompany the ambulance, an additional 2/6 is charged. Every application for an ambulance must state the name, sex and age of the patient, a description of the disease, the name of the person making the application, and full addresses from and to which the patient is to be conveyed. Arrangements for the reception of the patient must be made before application for the ambulance. The

Invalid Transport Corps of the St. John's Ambulance Association (Headquarters, St. John's Gate, Clerkenwell) is for non-infectious cases.

Removal of the Dead.—The presence of a body kept for many days after death in the common living and sleeping room of the very poor is constantly brought to the notice of the district nurse, and a private nurse is well aware of the objections to the retention of the dead in small, badly-built houses. The use of the mortuary would meet both classes of cases, and a magistrate (on receipt of a doctor's certificate) can order the immediate removal of one who has died from infectious disease, or any "dead body which is in such a state as to endanger the health of the inmates of the same house or room." When a person dies in hospital of an infectious disease, it is within the power of a qualified medical man to certify that, in his opinion, to avoid risk to other people, the body should not be taken from the mortuary except for interment. Disregard of this certificate is punishable by a fine of £10. It is illegal for the body of a person who has died of an infectious disease to remain unburied, without the written sanction of the medical officer of health, for more than 48 hours, except in a mortuary or room not used for other purposes. If any vehicle other than a hearse be used for conveyance of the body of a person who has died from an infectious disease, it must be afterwards disinfected.

A district nurse should, on all occasions, discourage the practice of keeping the dead in the midst of the living. The law is on her side, and it will second her efforts to prevent abuses injurious to the public health. The use of a mortuary should be advised whenever the dwelling house or lodging in which a death occurs does not furnish proper provision for the retention of the body until the funeral.

The Midwives' Act creates a Central Midwives' Board, under the sanction of the Privy Council, which consists of (1) four registered medical practitioners, of whom the Royal College of Physicians, the Royal College of Surgeons, the Society of Apothecaries, and the Incorporated Midwives' Institute each appoint one; (2) two persons appointed by the Lord President of the Council, of whom one is a woman; (3) and three persons, of whom the Association of County Councils, Queen Victoria's Jubilee Institute of Nurses, and the Royal British Nurses' Association each appoint one. The

Board controls the examination, admission, supervision\* and suspension from practice of midwives, and publishes annually a roll of certified midwives to which women holding certain certificates in midwifery or in practice for at least one year before April 1, 1905, were admitted. After this date any woman not so certified using the title of midwife is liable to a penalty not exceeding £5; and after April 1, 1910, it will be an offence for any woman not a legally qualified medical practitioner, unless certified under the Act, to attend women in childbirth habitually and for gain, except under the direction of a medical practitioner, except in case of emergency, under a penalty not exceeding £10. An appeal from any decision of the Board lies to the High Court of Justice within three months of notification of such decision. The fee for certificate is not to exceed one guinea, and the penalty for fraudulent or attempted fraudulent obtaining of such certificate is imprisonment with or without hard labour not exceeding twelve months, which may be inflicted on the prosecution of the local supervising authority before magistrates, with an appeal to Quarter Sessions.

Registration of Birth.—In England.—The duty of registering a new-born legitimate child falls upon the father or mother; of an illegitimate child, upon the mother; failing them or her, upon the occupier of the house, if aware of the birth; or, failing him, upon any person present at the birth; or upon the person in charge of the child, within 42 days. In case of failure to register, the Registrar may, after the expiry of 42 days, require, by notice in writing, any of the said persons to attend at his office at any time not less than seven days after notice, to give information and sign the Register. In case three months expire without a registration, a solemn declaration in writing must be made by any of the said persons before the Superintendent-Registrar within 12 months. After this period, registration can be made only by written authority of the Registrar-General; and in the last two instances any person registering a child other than according to law is liable to a penalty of £10. Any person finding a new-born living child, or any person in whose charge it may be placed, has the duty of registering within seven days.

<sup>\*</sup> Midwives must give written notice of their intention to practise to the County or Borough Council, who are the local supervision authority, and in January of each year a like notice of continuance, and such Council reports to the Board.

The name under which any child is registered may be altered within twelve months upon notice to the Registrar. There is a penalty of  $\pounds 2$  for refusing to give the Registrar information upon his notice.

In Scotland.—Registration is required within twenty-one days under a penalty of  $\pounds 1$ ; or, failing that, within three months under a penalty of  $\pounds 2$ ; or, failing that, a written declaration must be made before the sheriff within twelve months under a penalty of  $\pounds 5$ . In the case of any child, registered as illegitimate, being legitimated *per subsequens matrimonium*, the Register may be rectified on production of an extract of the entry of such marriage in the Register of Marriages at any subsequent time. In case of any doubt, the Registrar may require the production of the child under a penalty of  $\pounds 2$ .

IN IRELAND.—Upon the expiry of three months, and not later than twelve months, the declaration must be made before the magistrate; in other respects the provisions are the same as for England. A child born of Irish parents in any foreign country may, if the birth be intimated to the Registrar-General within twelve months, and certified by the British Consul of the country, be registered in the book called *The Foreign Register*.

ON THE HIGH SEAS.—On board any ship carrying passengers to or from any port in the United Kingdom, any birth must in some manner be recorded by the master, and a return made by him to the Registrar-General of shipping and seamen, or, at a port in a British Possession, to the Superintendent or Chief Officer of Customs at such port; and if elsewhere, to the British Consular Offices at the port, under a penalty of £5. A certified copy of the entry made by the master is in due course sent to the General Register Office, Somerset House. No further registration of a birth on the high seas than that made by the master of the ship is necessary.

Registration of Death.—IN EVERY CASE OF DEATH where a medical man has been in attendance, a certificate should be given by him to the person who is required by Act of Parliament (as indicated overleaf) to give information of the death; but in case such death is due to a violent, unnatural, or unknown cause (or under special circumstances dealt with by certain Acts of Parliament to be mentioned later), the certificate should clearly state such fact.

## TRADE 'OPA' MARK formerly known as 'SALODENT'



'Opa' cleanses in a scientific and not in a merely mechanical way. Aromatic antiseptics such as Salol, Eugenol, 'Pinol,' etc., are so combined in it that the whole cavity of the mouth as well as the interstices of the teeth are thoroughly and scientifically cleansed. 'Opa' destroys all matter which would induce tooth decay or taint the breath. It purifies the mouth and renders the breath fragrant.

### RULES OF THE CENTRAL MIDWIVES' BOARD

"The Rules of the Central Midwives' Board" may be obtained from Messrs. Spottiswoode & Co. Limited, 50, Gracechurch Street, E.C., post free for sevenpence (7d.). Every nurse who intends to obtain a midwife's certificate must make herself thoroughly acquainted with these rules. The following hints as to the application of the Rules of the Board to daily practice will be useful.

Personal Cleanliness.—In Section E of the Rules, under the heading "Directions to Midwives," stress is laid upon scrupulous personal cleanliness. The general considerations implied in the above embrace the following

points:

I. Good health, freedom from any infectious disease, such as leucorrhœa, the absence of decayed teeth, the absence of offensive nasal discharge, the absence of otorrhœa, i.e., discharge from the ear, the absence of bromidrosis (foul feet), or any other unhealthy taint, such as tuberculosis (consumption).

2. A daily hot bath with the free use of antiseptic soap.

3. Attention to the hands and arms. The nails must be closely trimmed and carefully scrubbed with a suitable brush. The skin of the hands should be preserved from chaps and not allowed to become rough. Any tags of skin near the nails should be cut short.

4. Suitable wearing apparel. Underclothing should be changed frequently. The dress should be made of print, holland, or other washable material which, when ironed, will present a smooth surface. Its make-up should be of the simplest character, and it should be short enough to clear the ground. The sleeves should be made to turn up above the elbow; arm-slips made of ironed white linen may be used, and these should button at the wrist and extend to the elbow. Over the dress a white linen apron should be worn. The nurse should cultivate cleanly instincts in all her habits; a woman who is slovenly in her surroundings and daily habits of life is not likely spontaneously to acquire cleanliness when called to act as a midwife. It is a mistake to think that the use of "antiseptics" will atone for the lack, or take the place, of ordinary cleanliness of body in personal toilet. Supposing a nurse to be fully endowed with what may be termed "cleanly instincts," she must still, when called to a confinement, adopt the accepted methods of making

herself and her appliances "surgically clean." To do this intelligently she must understand what is meant by the principles of asepsis and antisepsis. The word "asepsis" means germ-free. However much the nails are scrubbed with soap and water they cannot be rendered germ-free by those means alone, and use must therefore be made of germicide and antiseptics, or substances which kill germs or arrest their growth. Before making a vaginal examination the nurse should wash her hands and forearms with soap and water for five minutes, using a nail brush the while, and employing at least three changes of water. The nails and fingers are then to be rubbed with swabs dipped in spirit and water (equal parts), and finally the hands and forearms are to be soaked in a I in 1000 watery solution of mercury biniodide or perchloride for two minutes. As an additional precaution, thin rubber gloves may be worn by a nurse who is conducting a case of labour. The gloves should be boiled in water for ten minutes before use, and the hands smeared with a 1 in 1000 solution of mercury perchloride in glycerin before the gloves are put on. It is practically impossible, even with the strongest antiseptics, to render the parts about the finger nails germ-free, so that the safest plan to assure asepsis, so far as the nurse's hands are concerned, is to adopt the use of rubber gloves which have been sterilised by boiling.

Appliances needed in a Confinement.—In choosing the appliances necessary for attendance at a confinement, many factors have to be taken into account. Whenever possible, articles which are not injured by prolonged boiling are to be preferred; and portability is of importance, especially in district nursing. The douche-apparatus should be as simple as possible; the receptacle may be made of rubber which can be boiled, or of glass or unjapanned tin, and there should be no stop-cock. The rubber tubing must be boiled as well as the receptacle. Nozzles should be made of glass and not of vulcanite. A pair of bull-dog clips which can be boiled should be used in place of a stop-cock. The douche should be made with boiled water. The douching apparatus should be kept in a rubber bag of its own, or in a linen bag which can be boiled. The ordinary Higginson's enema should not be made use of for giving a vaginal douche, although for giving large soap and water enemata it is the best appliance. An ivory or metal nozzle should be chosen, as it can be boiled, and the enema apparatus should

also have its own case, and should not be put loose into the obstetric bag. The catheter must be made of silver, soft rubber, or glass, and it is well to possess both a hard and a soft catheter. A gum-elastic male catheter cannot be boiled, and must therefore never be used in obstetric practice. The scissors should have blunt points: sharp-pointed scissors are dangerous and are never needed. The clinical thermometer should register the temperature accurately in at most one minute. The nail-brush should be carried in a 1 in 1000 solution of mercury perchloride. The ligatures may be made of strong thread of No. 4 Chinese silk, and must be boiled for ten minutes before use. The catheters, scissors, thermometer and ligatures may be carried in a linen case with compartments for each. Of antiseptics there are many. The mercurial preparations fulfil every indication, and are therefore recommended. The biniodide and perchloride salts of mercury can be procured as 'Soloid' products from any chemist or drug-store in town or country. These 'Soloid' products are supplied in dark-blue bottles; they are readily soluble and form the most portable of any antiseptics. The bottles should be kept tightly corked. One gr. 8.75 'Soloid' product of either salt of mercury dissolved in a pint of water makes a sterile antiseptic solution of the strength of I in 1000; this is the proper strength to use for the nurse's hands and for the patient's external genitals. For the vaginal douche the solution must be diluted to I in 2000, and for an intra-uterine douche, and also for swabbing the baby's eyes, to I in 4000. The best antiseptic lubricant for smearing catheters, douche-nozzles, etc., is a 1'in 1000 solution of mercury perchloride in glycerin. Carbolic oil is not germ-free.

Hypodermic Apparatus.—If a nurse be desirous of procuring a hypodermic syringe, she should buy one made entirely of glass; this she can take to pieces and then wrap the parts in lint and boil safely. The B. W. & Co. All-glass Hypodermic Syringe will be found most suitable. The needles should be short, and care must be taken to keep the points from being bent; wire should be passed through and kept in the lumen of the needle when it is not in use. The needle must be boiled before and after use. A nurse's bag must contain a preparation of ergot. The best preparation is 'Ernutin.' Five to ten minims of 'Ernutin' (Hypodermic) are injected deeply into the buttock after the expulsion of the placenta,

and one drachm of 'Ernutin' (for oral administration) may be given by the mouth twice daily in cases where the early lochial discharge is too profuse, or where the lochia continue red after the first week. 'Ernutin' (Hypodermic) is a sterilised preparation of the active therapeutic principle of ergot, and if the nurse have been careful to sterilise her needle and syringe, and also the patient's skin, there is no risk of infecting the patient by its use in hypodermic injections. The nurse's bag should have a removable linen lining, which may be taken out and boiled. It is essential that each appliance contained in the bag have its own washable wrapper. The obstetric bag should not be used for promiscuous articles, such as pocket-handkerchiefs, purses and ordinary gloves. Nothing but the necessary appliances and drugs required in practice should be put therein.

Puerperal Fever.—The preceding rules as to personal cleanliness, asepsis and antisepsis all aim at one great object—the prevention of puerperal fever. Prevention is better than cure, but the nurse must know how to deal with puerperal fever should it arise. She must realize to the fullest that this form of infection is capable of being carried from patient to patient by actual contact. Deadly germs can lurk in the pores of the skin, in the cavities of the nails, in the eye and lumen of the catheter, in the nozzles of the douche and enema, in the wrappers of instruments, in the obstetric bag, and lastly in the nurse's clothing. Should, therefore, a nurse unhappily find herself in attendance upon a patient suffering from puerperal fever, or other infectious illness, she must comply with the rules of the local sanitary authority; before attending another case of labour she must boil all her appliances, procure another obstetric bag, and send her clothing to be disinfected and stoved by the sanitary authorities. (For instructions as to fumigating a room and clothing, see page 37). The preceding sections refer to the nurse's duties as they concern herself. Her duties in respect to her patient must now be considered.

Duties during Labour.—During the first stage of labour it is the nurse's duty to see that the bowels and bladder are empty, and to ascertain whether or not the patient is suffering from a vaginal discharge. A loaded bowel and a full bladder are fruitful sources of uterine inertia. If need be, an enema must be given, and if other means fail to empty the bladder, a catheter must be passed. A nurse

should never be in a hurry to pass a catheter; before resorting to its use she should try the effect of hot stupes, steam, and change of position. An internal examination will be necessary to judge of the progress of labour and to diagnose the presentation. If there be a yellow discharge, a vaginal douche of I in 2000 solution of mercury perchloride should be given, and the patient's external genitals washed with soap and water and well swabbed with I in 1000 perchloride solution before the lubricated finger or fingers are introduced. A sponge or flannel should never be used for washing with soap or for swabbing with antiseptics; boiled cotton-wool is the best material, and this should be burned immediately after use. To pass the catheter the same precautions are needed, i.e., the use of soap and water followed by swabbing with I in 1000 perchloride solution. Smegma should be scrupulously removed from around the clitoris; the nymphæ should be separated, and the vestibule and orifice of the urethra exposed and cleansed. catheter, having been boiled for ten minutes and dipped in sublimate glycerin, is passed by the aid of vision for one inch and a half into the urethra, and the urine drawn off into a suitable vessel. If rubber tubing be used on the end of the catheter, it must be boiled with the catheter before and after use. If it be necessary to use a catheter in the second stage of labour, a soft rubber instrument should be employed.

An internal examination should be made as seldom as possible, and never without good reason. The nurse should not leave the patient after the membranes have been ruptured, but should stay with her for at least half an hour after the placenta has come away. If the placenta have not come away at the end of twenty minutes after the child is born, the fundus should be grasped and pressed downwards and backwards; the placenta should be received at the vulva in the other hand, and twisted round gently to aid in the separation of the after-coming membranes. A douche should not be given except in cases of post-partum hæmorrhage. The patient should be thoroughly cleansed after complete delivery, antiseptics being used for the vulva as before. All soiled bed and other linen should be removed, the room, bedding, child and patient should be rendered perfectly clean; the nurse should take the patient's pulse and temperature, and should be sure uterine contraction is well maintained before leaving the house.

Duties during the Lying-in Period.—The nurse must give detailed instructions for the proper feeding and for securing the general comfort of her patient during the lying-in She must visit the sick room daily for the first four. days and keep a register of the temperature, pulse, amount of the lochia, action of the bowels, state of the breasts and of the bladder, and note the daily involution of the uterus. regard to this latter point, it should be remembered that if the uterus be well contracted, as it should be, at the end of labour, the fundus will lie about mid-way between the pubes and navel. The next day, under normal conditions, i.e., if the bladder be not distended, it will be found to lie at the level of the navel. The level of the fundus now subsides about one finger's breadth daily, so that by the eighth or ninth day it will reach only to the level of the pelvic brim. After the fourth day the nurse is required to make alternate daily visits, so that she will see her patient on the sixth, eighth and tenth days. After this period, if there have been no rise of temperature or acceleration of pulse, if the secretion of milk be good and the nipples healthy, if the bowels and bladder be acting well, if the red lochia have given place to a scanty discharge and there be no pain or unusual debility, the patient's condition may be considered normal and she may get up from bed. If, however, on the day after the confinement the fundus uteri be found to be higher than normal, and if, upon enquiry, it be found that the patient has not passed urine, a fluctuating cystic swelling may be discovered immediately above the pubes. This is the bladder distended with urine. The same methods of trying to induce an action of the bladder as previously advised should be adopted. Hot fomentations applied to the vulva and over the pubes sometimes have the desired effect. The patient may be placed on a bed-pan into which hot water has been poured; she may even be placed upon her hands and knees, since it is difficult for some women to void urine when lying in the recumbent position. Should all these means fail, the patient must be laid on her back with her knees drawn up, the labia minora held aside with the thumb and index finger of the nurse's left hand, and a boiled Jacques' or glass catheter introduced. For the full details of the antiseptic precautions to be taken in passing a catheter, see page 147. If piles should protrude during the first few days following labour, they should be cleansed with warm I in 2000 solution of

mercury perchloride, smeared with 'Dartring' Lanoline, and pushed carefully back, and an 'Enule' Suppository of gall and opium inserted. If the nurse cannot do this, she must send for medical aid.

Duties to the Child.—The duties of the nurse to the child begin directly the head is born. She must first see if the cord is around the child's neck, and unravel it if necessary. Next she must bathe the child's eyelids and parts around the eyelids with I in 4000 mercury perchloride solution; then with clean hands the lids must be separated, and fresh clean lotion of the same strength as before must be dropped into the inner corners of the eyes, and allowed to trickle over the surface of the eyeballs. This is done to prevent the risk of purulent ophthalmia, to which terrible disease more than 50 per cent. of total blindness is due. A more efficient preparation for application to the eyeballs is a 10 per cent. solution of protargol (made by dissolving three 'Soloid' Protargol, gr. 4, in a dessertspoonful of warm water), but as its use implies the addition of an extra drug to the nurse's outfit, the Board does not mention it. The source of ophthalmia neonatorum is a purulent vaginal discharge containing the specific germs of gonorrhœa. The best preventive measure, therefore, to adopt in cases of vaginal, vulval, or cervical suppuration, is the free use of a vaginal douche of I in 2000 mercury perchloride. The vagina should be douched before the second stage of labour has commenced, i.e., before the child's face has come into contact with the infected areas.

The cord should not be divided until it has ceased to pulsate. It is tied in two places, one knot being placed two inches from the navel, and the second an inch away from the first on the placental side. Before applying the knots, the cord should be expressed by running the finger and thumb along it. Reef knots must be employed. The division is made half-way between the ligatures by means of blunt-pointed scissors, and whilst the cord is being divided, it should lie in the palm of the nurse's left hand, after passing between the middle and index fingers. The stump must appear quite dry; or if it ooze it must be tied again.

In cases of blue asphysia, skin stimulation by smeaking

In cases of blue asphyxia, skin stimulation by smacking, or the sprinkling of cold water on the child's chest, are generally sufficient to start respiration. All mucus must be cleared out of the nose, mouth, and pharynx, and if

necessary, hot and cold baths, used alternately, are to be employed, and also Sylvester's method of resuscitation. If the child is in a state of white asphyxia, Sylvester's plan of artificial respiration is started at once, even before the cord is separated; all the air passages should be freed of discharge before this is done. In white asphyxia the more violent means of restoring breathing, such as Schultze's method, must not be employed. The child should be smeared with pure olive oil to remove the vernix caseosa. It should be placed on the nurse's forearm, and immersed in a bath at a temperature of 100° F., and washed with soap and water. Then it must be thoroughly dried, and examined for any congenital defects, such as harelip, cleft palate, cephal-hydrocele, cephal-hæmatoma, spina bifida, webbed fingers and toes, clubbed feet, etc. The little finger, lubricated with 'Dartring' Lanoline or 'Borofax,' must be passed for one inch up the anal canal, the prepuce must be drawn back if possible, and the glans penis cleansed from any collection of smegma. tight foreskin or any other abnormality must be reported to a doctor. After the child is dried thoroughly, the cord must be wrapped in sterile gauze, and a flannel binder sewn on around the child's body. The armpits and groins, the cleft of the buttocks and the genitals are to be dusted with equal parts of starch and boric acid, but zinc ointment or other fatty substances are not to be used. The diapers should be frequently examined; a damp diaper must not be dried and re-applied, but must be put into a I in 1000 solution of chinosol (made by dissolving one 'Soloid' Chinosol, gr. 8-75, in one pint of water) and allowed to soak for several hours. It should be thoroughly washed in soap and water, boiled for fifteen minutes, and then dried and put away in a suitable wrapper for future use. The child's parts must be thoroughly cleansed with warm water, dried, and powdered after each change.

The child should be first put to the breast before the nurse leaves the house after the confinement, in order to see if it can suck. It will require no milk for the first three days, but may be given a little sugar and water and a few drops of cream or olive oil to aid in the expulsion of meconium.

When the cord drops off, generally on the fifth day, the scar must be carefully examined, and any serous discharge from the navel must be cleansed by daily washing out the depression with I in 4000 perchloride solution, and a sterile gauze dressing applied. Should the scar project, a pad of

boric lint or sterile gauze must be applied behind a firm binder. 'Tabloid' Compressed Boric Lint and Boric Gauze are most suitable for these purposes. Hernia (rupture) in the groins or femoral regions must be reported to a medical man.

If artificial feeding be necessary, it should be begun on the third day. Great care must be taken in the selection of bottles, teats and diet. The old-fashioned boat - shaped feeder with two apertures, one for the teat placed at one end, and the other for purposes of filling and ventilation, placed in the middle of the upper surface, is recommended. The teats should be large and should draw well. Three bottles and six teats should be kept, and only the amount of one feed placed in the bottle at a time. Before and after use, the bottles and teats should be scrubbed out and boiled, the teats being turned inside out. The bottles and teats may be kept in a saturated solution of boric acid (one 'Soloid' Boric Acid, gr. 15, to each ounce of water), or in water containing bicarbonate of soda, when not in use; they must be rinsed in sterile water before the feed is introduced. (Details as to the proper feeding of infants will be found on page 125.) The child's mouth must be washed out after each feed with either weak boric acid lotion (made by dissolving one 'Soloid' Boric Acid, gr. 15, in four ounces of water) or sterile water. The child must be nursed whilst taking its food; it must not be allowed to sleep with the teat in its mouth, and on no account must a "comforter" be used. If thrush develop, it is a disgrace to the nursing. Its treatment implies careful attention to the above details, and the washing-off of the white fungus with swabs soaked in glycerin of borax. If the child be allowed to take its food too quickly, or if too much be given at a time, vomiting and curdy stools will result. In slight gastric and intestinal disturbance, one 'Tabloid' Sodium Citrate, gr. 2, may be added to each ounce of food. In severe cases of diarrhea and vomiting, the nurse must acquaint the doctor with the details, i.e., she must be prepared to state how often and how soon after food the child vomits, whether the stools are offensive, and how often the bowels act.

General considerations which have not yet been dealt with are—

1. Attention to the Patient's Breasts.—Patients may be instructed to draw out depressed nipples before the confinement and to bathe them with 'Hazeline,' with equal

parts of methylated spirit and water, or with Eau de Cologne. The nipples must be cleansed with boric acid solution (made by dissolving one 'Soloid' Boric Acid, gr. 15, in three ounces of water) and dried after each feed. If they become sore or abraded they may be protected during suckling by a nipple-shield, and chaps may be carefully painted with 'Hazeline,' or compound tincture of benzoin, by means of a camel hair pencil. Should the breasts become "caked" and hard, gentle massage with 'Dartring' Lanoline, or warm olive oil, done by gently rubbing towards the nipple, generally relieves the condition. If secretion stop, or the breasts become red, tender and painful, medical advice must be obtained.

2. The Use of Drugs. — Midwives are not given a schedule of drugs by the Board, it being assumed that whereever possible they will consult a doctor as to medicines. A midwife must, however, be provided with antiseptics and with some preparation of ergot (see page 145). Moreover, it is necessary that she should administer a purgative, and for this purpose she may give one ounce of castor oil on the third night after the confinement, or two drachms of liquorice powder (four 'Tabloid' Compound Liquorice Powder, gr. 30), or half a drachm of the liquid extract of cascara sagrada (one 'Tabloid' Cascara Sagrada, gr. 4). She may administer glycerin to empty the lower bowel (see pages 39 and 81), and with regard to the giving of enemata, including the drugs to be used for the purpose, she should consult page 38 of this Diary. The nurse must not attempt to drug the baby.

3. Safeguarding a Patient during a Fit.—All bands are to be loosened, corsets removed, and the patient kept, if possible, with her head to one side and her chin a little lowered, so that saliva and froth may run out of the mouth. The teeth must be separated by any article available, such as a spoon, piece of stick, or closed blunt-ended scissors. With the tongue in the position above indicated the head cannot fall backwards and obstruct the pharynx. No examination must be made during a fit. A doctor must be sent for at once, but if his arrival be delayed, the nurse must stay with the patient after the fit is over, see that she is kept perfectly quiet in bed, and clean up any voided urine or fæces.

4. To prevent Rupture of the Perineum.—When the head is dilating the perineum, the patient should be laid on her left side and the buttocks drawn to the edge of the bed. The nurse should sit in a chair and pass her left arm over the patient's right hip, and with the left hand passed over the pubes between the patient's thighs she should press the vertex with three fingers towards the pubes while it descends on the perineum during a pain. The nurse can in this way control the amount of pressure made by the head on the perineum. The head should be left for a while with the perineum over the vertex before allowing the face to slip out. Great care must be taken in the delivery of the shoulders and also of the buttocks in a case of breech presentation.

5. The treatment of Post-partum Hæmorrhage. —The nurse must not relax her hold of the fundus for any consideration whatever. She must therefore get first aid from anyone available. The placenta must be expelled, and also all clots from the uterine cavity, because the uterus will not properly contract unless it be empty. A vaginal, and, if necessary, an intra-uterine douche, at a temperature of 115° F., must be given and repeated. Ten minims of 'Ernutin' (Hypodermic) should be injected into the buttock, and bi-manual compression carried out. To do this effectively, the patient is placed on her back, and the left hand is introduced into the vagina in the form of a cone. Next the fingers are bent into the palm and a tight fist made; the fist is pushed up in front of the cervix into the space called the anterior fornix or vault of the vagina. The right hand, which has all the while been grasping the fundus, presses it down as firmly as possible on to the hard broad shelf made by the knuckles and first phalanges of the fingers of the left hand. The bleeding surface is the placental site, and this is usually situated on the posterior wall of the uterus near the fundus. The whole of the placental site can be compressed by the method just described, and hence this is the most effectual means of dealing with a case of postpartum hæmorrhage. In addition, a second person may press, with the fingers, the aorta against the patient's spine, such pressure being exerted through the anterior abdominal wall one inch below and to the left of the umbilicus. assistant may be told to bandage the patient's legs, to elevate the foot of the bed, and to open the windows for a few inches at the top, if this have not already been done. Meanwhile a doctor will have been summoned.

The restrictions placed by the Board on the duties of a midwife are fully given in the "Rules."

### GENERAL RULES OF QUARANTINE

The details in the following table are for the most part in accord with the general regulations of the Medical Officers of Schools' Association.

The undermentioned periods of quarantine can only be considered safe if thorough disinfection be carried out previous to return amongst the healthy. This should in all cases be done under the guidance of the medical attendant.

### PERIODS OF QUARANTINE

Disease	Isolation necessary after suffering from :	Isolation required after exposure to:			
Asiatic Cholera	Seven days from complete cessation of diarrhœa.	10 days' quarantine			
Chicken Pox	Until every scab has fallen off.	20 days' quarantine			
Diphtheria	Four weeks after convalescence is completed, there being no longer any form of sore throat, nor any kind of discharge from the throat, eyes, nose, ears, etc., no albuminuria, and bacteriological examination negative.	12 days' quarantine			
Enteric Fever (Typhoid Fever)	There appears evidence that in certain cases the power of infection may persist for many weeks—probably through the urine and fæces.	23 days' quarantine			
German Measles (Roetheln) and Epidemic Roseola	In not less than ten days from the date of the appearance of rash, the exact time depending on the nature of the attack.	20 days' quarantine			
Influenza	Three days after the temperature has become normal, and all catarrhal discharges have ceased.	5 days' quarantine			

### RULES OF QUARANTINE

Disease	Isolation necessary after suffering from:	Isolation required after exposure to:		
Measles	Not less than two weeks from the date of the rash, if all desquamation and cough have ceased.	16 days' quarantine		
Mumps	Not less than three weeks; and then only if one clear week has elapsed after the subsidence of all swelling.	24 days' quarantine		
Plague	Twenty-one days	3 weeks' quarantine		
Ringworm	When a medical examination of the whole scalp (any suspicious spots being scrutinized with a lens) reveals no brokenoff, diseased hairs.			
Scarlet Fever	Not less than six weeks from the date of the rash, and then only if desquamation have com- pletely ceased, and there be no appearance of sore throat, no discharge from the ears, nose, etc., and no albuminuria.	ro days' quarantine		
Small Pox	Until every scab has fallen off.	16 days' quarantine		
Typhus	After four weeks. The bedding and clothes retain the poison for a long time.	14 days' quarantine		
Whooping Cough	Not less than five weeks from the commencement, and then only if all characteristic spas- modic cough and whooping have ceased for at least two weeks.	21 days' quarantine		



NATIONAL ANTARCTIC EXPEDITION

The entire Medical Equipment of this Expedition was furnished by Burroughs Wellcome & Co.

### 'TABLOID' MEDICAL EQUIPMENTS

AND

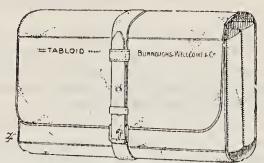
#### ANTARCTIC EXPLORATION

'Tabloid' Medical Equipments have been used with unequivocal success in all the important Polar enterprises of recent years, the expeditions associated with the names of Nansen, Peary, Jackson-Harmsworth, and the Duke of the Abruzzi having been provided with 'Tabloid' Equipments.

#### NATIONAL ANTARCTIC EXPEDITION

The entire medical outfit of the National Antarctic Expedition was furnished by Burroughs Wellcome & Co., and on the return of the *Discovery*, with the members of the expedition on board, the medical officer made a highly satisfactory report on the 'Tabloid' medical equipment.

In August, 1901, the *Discovery* left England, and in the following January crossed the limit of the Antarctic Circle. Having passed the farthest castward point attained by Ross sixty years before, the explorers discovered a new land, which they



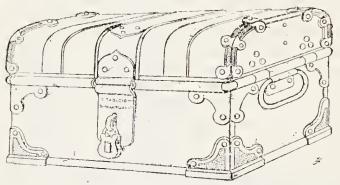
One of the 'Tabloid' Brand Medicine Cases carried by the National Antarctic Expedition.

named King Edward VII Land. One of the most noteworthy features of the expedition was the arduous sledge journey undertaken by the Commander, Captain Scott, accompanied by Dr. Wilson and Lieutenant Shackleton. This journey over the icc occupied three months, a distance of over 900 miles being covered during that period. The achievements of previous Antarctic explorers were far surpassed, and the record latitude of \$2°17' South was reached. During the absence of the sledge party, the relief ship Morning had located the Discovery, and Captain Scott, on returning, found instructions awaiting him not to spend another

winter in the ice. It was impossible, however, for him to comply with this instruction, inasmuch as the ice did not break

up and release the Discovery as was anticipated.

On sledge journeys the question of weight is of great moment. The traveller, on such occasions, must carry but the barest necessaries, and of these the lightest procurable. The medicine chest is an important item, for upon the efficacy of its contents the lives of the explorers may depend. Every drug carried must be of the utmost reliability, in the most



One of the 'Tabloid' Brand Medicine Chests carried by the National Antarctic Expedition

compact state, and capable of withstanding an extremely low

temperature.

That 'Tabloid' Medical Equipments fulfil all requirements has been proved again and again. They enable the traveller to carry a comparatively large supply of medicines, and may be used under conditions which would render the carriage and administration of ordinary preparations impossible.

and administration of ordinary preparations impossible.

To the enthusiasm of Sir Clements Markham, K.C.B., then President of the Royal Geographical Society, the successful organization of the expedition is largely due. Referring to the 'Tabloid' Medical Equipment of the

Discovery, he reports:-

"The Medical Equipment of the Exploring Ship of the National Antarctic Expedition was entirely supplied by Messrs. Burroughs Wellcome & Co., and proved in every way most satisfactory. The few other drugs and preparations which were taken with the Expedition were only supplied for purposes of experiment, and can in no way be regarded as part of the Medical Equipment."

Cleverto Micarhham

Dr. Koettlitz, the senior Medical Officer to the expedition, reports:—

### "'DISCOVERY' ANTARCTIC EXPEDITION.

- "The Medical Equipment of the *Discovery* Exploring Ship, of the National Antarctic Expedition, was entirely supplied by Messrs. Burroughs Wellcome & Co., mostly in the form of 'Tabloid,' 'Soloid' and 'Enule' preparations.
- "The preparations proved, in every way, most satisfactory, and there was no deterioration of any of them, in spite of the conditions of climate and temperature to which they were exposed. The few other drugs and preparations which were taken with the expedition were only taken for purposes of experiment.
- "The cases supplied by Burroughs Wellcome & Co. to us have also been found satisfactory; the small leather one was very useful upon sledge journeys, being light and compact. The No. 250 'Tabloid' Case was used for some weeks at the camp eleven miles north of the ship, when the whole ship's company was engaged in sawing and blasting the ice, and it was found very convenient.
- "The other cases were useful in our cabins, etc., for a handy supply."

RefinaldKættits

The relief ship *Morning* was also provided with a 'Tabloid' Medical Equipment, and the Medical Officer, Dr. George Davidson, sends the following report:—

### "ANTARCTIC RELIEF SHIP 'MORNING."

"I wish heartily to express my perfect satisfaction with the medical equipment which was supplied to the Antarctic Relief Ship Morning by Burroughs Wellcome & Co. When I say that it was compact, yet complete, that everything was just to hand, and that during a period of two years and three months I was never at a loss to find just the medicine I wanted, and that without delay, I need say no more to emphasise the extraordinary convenience which a 'Tabloid' and 'Soloid' outfit is to a ship such as ours, whether at sea

or in the ice. I found the 'Tabloid' and 'Soloid' products to remain unchanged throughout the whole period of my commission, and to equal in efficacy the best medical preparations I have yet had occasion to use. It is impossible to realise without experience how much can be condensed by this mode of exhibition in a very small space. I strongly advise all intending explorers to betake themselves to Burroughs Wellcome & Co. for their medical equipment, and they will not be disappointed."

George A. Davidson

From Dr. Edward Wilson, also, who was in charge of some of the sledge journeys from the *Discovery*, the following report has been received:—

### "'DISCOVERY' ANTARCTIC EXPEDITION.

"Though there was but little serious sickness on the *Discovery* during the recent Antarctic Expedition, the 'Tabloid' preparations and the cases were put to a fairly rigorous test, not only in the ship, but on the various sledge journeys that were undertaken, during which they experienced temperatures as low as 68° below zero, and much rough handling, without any loss in efficiency or usefulness. Certain of the 'Tabloid' Ophthalmics were freely used for snow blindness, and were found to be most convenient."

Edward. allotoon.

### SCOTTISH NATIONAL ANTARCTIC EXPEDITION

To the Scottish National Antarctic Expedition belongs the distinction of having attained the latitude of 74°1′ South. Burroughs Wellcome & Co. supplied the entire medical equipment, which gave the utmost satisfaction.

Dr. J. H. Harvey Pirie, the Medical Officer of the *Scotia*, reports as follows:—

"I may say your 'Tabloid' medicines were very satisfactory, and, especially at sea, they are most convenient, as in rough weather it is quite impossible to do any accurate weighing or measuring with ordinary drugs."



s.s. "Scotia"
Scottish National Antarctic Expedition

### SOME OTHER PRODUCTS OF B. W. & CO.

The products of Burroughs Wellcome & Co. are not confined to medicinal agents. As an example of their wide field of usefulness, in addition to the 'Tabloid' medicines, reference may here incidentally be made to the following preparations:—

'Saxin' Trade Saxin' is a delightful sweetening agent

about 600 times sweeter than sugar, and has been most aptly described as "the sweetest thing on earth." Each ½ grain is equal to a lump of sugar, and should be used in the same way, one or more, according to taste, being dissolved in tea, coffee, cocoa, chocolate or other beverage, or food. It is of delicate flavour, and possesses the considerable advantage that it may be taken without ill effect by those who suffer from diseases in which the administration of sugar is forbidden. Dishes to which such patients are



restricted may thus be rendered palatable without danger.

'Tabloid' Brand Tea.—'Tabloid' Tea is a brand of pure tea particularly adapted for use by those moving from



place to place. It is more portable than ordinary tea, and as it excels it in strength, flavour and keeping qualities, it is coming into very general use. The convenience with which a sufficient quantity of 'Tabloid' Tea may be apportioned, for any quantity of

beverage from a cup upwards, is a great consideration. Two or more, according to the strength required, should be used for each cup of tea. Use fresh boiling water, pour it on the tea in the cup or tea-pot, stir with a spoon, allow it to stand for two or three minutes, pour the infusion off the leaves, and

add sugar, or 'Saxin,' and milk to taste. If the cup or teapot be previously heated with hot water, and covered during infusion, less time will suffice, and better results be obtained. 'Tabloid' Tea is issued in two qualities (see page 102).

'Tabloid' Brand Thirst Quencher.—'Tabloid' Thirst Quencher is a pleasant and refreshing effervescent preparation composed of sodium bicarbonate and tartaric acid, flavoured with lemon and 'Saxin.' As it provides a compact and convenient means of carrying these ingredients, it has been much used by explorers and military men to allay the terrible thirst experienced in hot climates during long journeys. For similar reasons this convenient preparation may be employed at home, and it is specially valuable in the sick room. One may be allowed to dissolve slowly in the mouth, or one or more may be powdered and added to half a tumblerful of water to make an effervescing draught.

'Tabloid' Brand 'Forced March.'—This preparation, as its name suggests, is used when marching under trying circumstances. It contains the active principles of kola and coca, which lessen the sense of fatigue and hunger during periods of enforced physical and mental strain, and increase the powers of endurance.

'Tabloid' Brand Photographic Chemicals.— These products present photographic chemicals of the finest



quality in accurate quantities, and so obviate the necessity for stock solutions, which are always liable to deteriorate, and are frequently bulky and troublesome to prepare. For use they are simply dissolved in a stated quantity of fluid. Only sufficient solution need be made up for the work in hand, and therefore the full activity of fresh baths for developing, toning, etc., is secured.

'Tabloid' Photographic Chemicals are a great boon

when dark room space is limited or when rooms are only temporarily used for photographic purposes. They are

extremely compact, and are much more convenient than bottles of fluids. To lady photographers these preparations particularly appeal because they are much easier and cleaner to prepare and use than are ordinary chemicals and solutions.

For use abroad, or when travelling, 'Tabloid' Photographic Chemicals are absolutely essential, because of their

portability, reliability and keeping properties.

Pamphlets on development, toning, intensification, reduction, and full price lists are supplied gratis on request.

### 'Tabloid' Developers

'Tabloid' Brand—

"Pyro Developer

,, Pyro-Soda Developer (Ilford formula)

" Pyro-Metol Developer (Imperial Standard formula)

"Hydroquinone Developer

" Metol Developer

'Tabloid' Brand-

,, Metol-Quinol Developer

Amidol Developer

Paramidophenol Developer

Ortol Developer

"Eikonogen Developer

,, Glycin Developer

#### 'TABLOID' Toners

'Tabloid' Brand-

,, Gold Chloride, gr. \frac{1}{2}, \text{with} Sodium Formate Compound, Sulphocyanide Compound, Sodium Phosphate, Sodium Tungstate, Borax, Sodium Bicarbonate, or Thio-Compound sulphate (Combined Bath)

'Tabloid' Brand—

,, Platinum Toning Compound

" Chloroplatinite Toning

Compound

", Copper Ferrocyanide Toning Compound (for toning bromide prints and lantern slides)

", Sepia Toner (for bromide prints and lantern slides)

### 'TABLOID' ACCESSORIES

'Tabloid' Brand—

,, Potassium Bromide, gr. 1

,, Ammonium Bromide, gr. 1

,, Sodium Citrate, gr. 1

,, Sodium Carbonate, gr. 44

'Tabloid' Brand—

,, Potassium Metabisulphite, gr. Io

", Sodium Sulphite, dried, gr. 5

etc., etc.

'Tabloid' Photographic Outfit .-- This compact complete chemical outfit for developing, toning and fixing



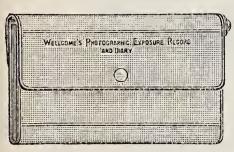
'Tabloid' Photographic Outfit Measurements,  $4\frac{1}{2}$  imes  $4\frac{1}{4}$  imes 2 in.

is comprised in a neatly japanned case metal measuring only  $4\frac{1}{2} \times 4\frac{1}{4} \times 2$  in. The standard contents are 'Tabloid' Metol-Quinol, to make 44 oz. of developer; 'Tabloid' Pyro, to make 40 oz. of developer; 'Tabloid' Combined Bath, to make 30 oz. of solution; and a supply of 'Tabloid' Fixer and Restrainer. These contents however, be varied if so desired.

### Wellcome's Photographic Exposure Record and Diary

One of the greatest helps to success in photography is Wellcome's Photographic Exposure Record.

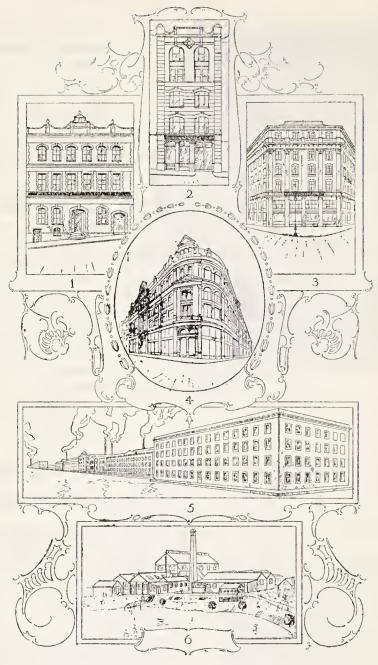
It is a compact encyclopædia of photographic information,



One-quarter actual size

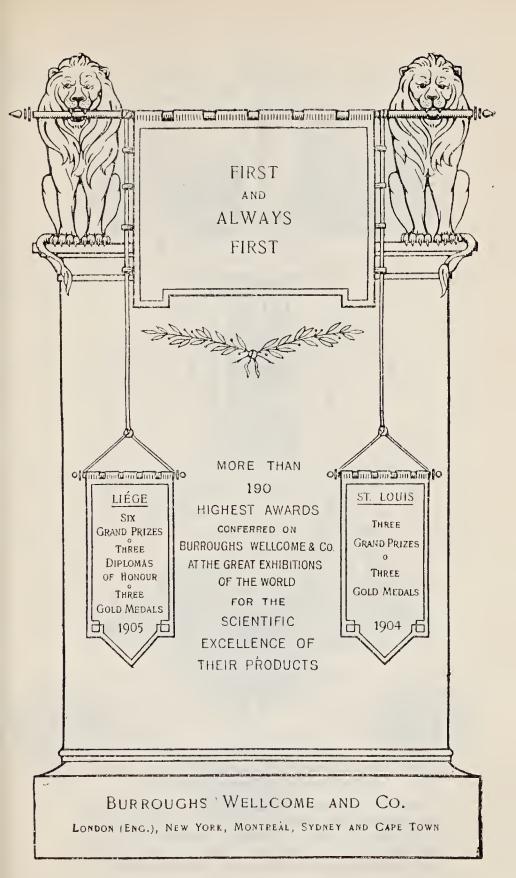
particularly as regards correct exposure. Tables are given showing the variations in exposure under all conditions, and an ingenious calculator is included, so that no arithmetical computations are necessary. This calculator gives the correct exposure for any plate, any

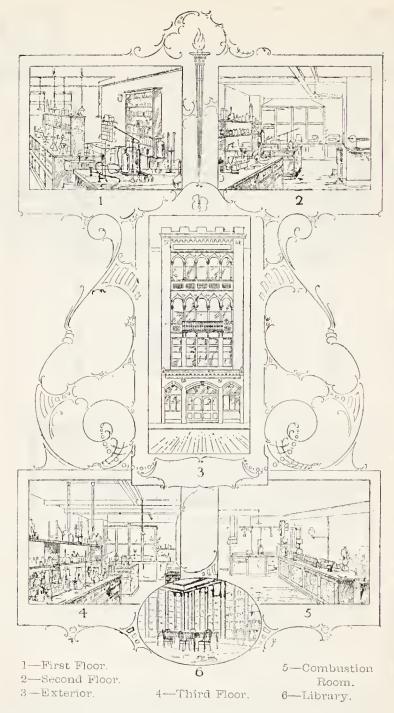
stop, any subject, at any time of the year, and any hour of the day, by one turn of one scale. The book includes ruled pages for entering particulars of exposures, a diary for the year, memoranda pages, etc., etc.



Burroughs Wellcome & Co.'s Offices, Warehouses, Works and Depots in England, Australia, South Africa and Italy

1—Cape Town 2—Sydney, N.S.W. 3—Milan 4—London (Eng.) 5—'Wellcome' Chemical Works, Dartford, near London, England 6—Australian Works, Sydney





Wellcome Chemical Research Laboratories, King Street, London, England

This PRIVATE INSTITUTION is absolutely separate and distinct from the business of Burroughs Wellcome & Co., and is under separate and distinct direction, although in this Institution a large amount of important scientific work is carried out for the firm.

THE

### WELLCOME CHEMICAL RESEARCH LABORATORIES were awarded

ONE GRAND PRIZE

AND

THREE GOLD MEDALS

AT THE

International Exposition at St. Louis, 1904

ONE GRAND PRIZE

ONE DIPLOMA OF HONOUR

AND

TWO GOLD MEDALS

AT THE

INTERNATIONAL EXHIBITION AT LIÉGE, 1905

for Chemical and Pharmacognostical Research, etc. etc.









St. Louis



THREE GOLD MEDALS—ST. Louis

### POSTAL INFORMATION FOR THE UNITED KINGDOM

Inland Letter Rates.—Not exceeding 4 oz., 1d., and \(\frac{1}{2}d\).
extra for every additional 2 oz. No letter may exceed 24 in. in length,
12 in. in width, or 12 in. in depth, unless sent to or from a
Government office.

Newspaper Rates.—Every registered inland, newspaper, if wrapped so that it may be easily examined by the post office authorities,  $\frac{1}{2}d$ , without regard to weight; more than one in a packet,  $\frac{1}{2}d$ , for each newspaper. A packet containing two or more registered newspapers, however, is not chargeable with a higher rate than would be chargeable on a halfpenny packet or letter of the same weight. Newspaper packets must not exceed 5 lb. in weight, 2 feet in length and 1 foot in width or depth.

Halfpenny Packets.—The undermentioned articles are transmissible for a postage of one halfpenny, provided they conform to the official regulations published in the Post Office Guide, and do not exceed 2 oz. in weight. Above that weight they are liable to letter postage, unless sent by Parcel Post. Books and other printed and written matter not in the nature of a letter, drawings, photographs, maps, plans, invoices, orders for goods, receipts, statements, circulars, Christmas cards, birthday cards, manuscripts for press, proofs, etc.

Registration.—The fee for registering an inland letter or packet is 2d over and above the ordinary postal rate. The packet must be enclosed in a strong cover, securely fastened, and must be given to a post office official, and a receipt obtained for it; if containing coin, it must be enclosed in a special registered letter envelope, sold at all post offices. The payment of the ordinary registration fee of 2d effects an insurance on the packet against loss or damage up to £5; a fee of 3d, up to £20; a fee of 4d, up to £40, and so on, at the rate of an extra 1d for every additional £20 up to £400, unless contents are coins, when the limit of compensation is £5.

The fee chargeable for registration to places abroad is 2d. The sum payable for insurance, including registration, on letters to Foreign Countries for which insurance can be accepted, is 5d. for £12, and  $2\frac{1}{2}d$ . extra for every additional £12 up to £120.

Letter Cards.— $\tau_4^1 d$ . each, or 9d. for 8.

Post Cards.—Stout or thin cards,  $\frac{3}{4}d$ . each; 6d. for 11; stout cards, 5s. for 110; and thin cards, 10s. for 220.

Parcel Rates.—1 lb., 3d.; 2 lb., 4d.; 3 lb., 5d.; 5 lb., 6d.; 7 lb., 7d.; 8 lb., 8d.; 9 lb., 9d.; 10 lb., 10d.; 11 lb., 11d. No parcel may exceed 11 lb. in weight. The greatest length allowed is 3 ft. 6 in., and the maximum of length and girth combined is 6 ft.; i.e., a parcel of 3 ft. 6 in. long may measure 2 ft. 6 in. in girth round the thickest part.

Money Order Rates.—For sums not exceeding £1, 2d.; above £1 but not exceeding £3, 3d.; above £3 but not exceeding £10, 4d.; above £10 but not exceeding £20, 6d.; above £20 but not exceeding £30, 8d.; above £30 but not exceeding £40, 10d.

Inland Postal Order Rates.—Postal Orders may now be obtained for every 6d. up to 20s., at the following rates:—6d., 1s., 1s. 6d., 2s., 2s. 6d.,  $\frac{1}{2}d$ .; 3s. to 15s. inclusive, 1d.; 15s. 6d. to 20s. inclusive,  $\frac{1}{2}d$ .; 21s.,  $\frac{1}{2}d$ . The value of a Postal Order may be increased by affixing stamps not exceeding three in number, and to an amount not exceeding 5d. Odd half-pence will not be paid.

Telegram Rates.—Throughout the United Kingdom, 6d. for the first 12 words, and  $\frac{1}{2}d$ . for every additional word, the name and address of receiver, and of sender if telegraphed, being counted. London district initials are counted as one word, and figures are counted as five to a word.

Foreign and Colonial Letter Rates.—The prepaid rate of postage on letters from the United Kingdom for all Foreign Countries (except Egypt) is  $2\frac{1}{2}d$ . per  $\frac{1}{2}$  oz.; from the United Kingdom to nearly all British Possessions, and to Egypt, the rate is 1d. per  $\frac{1}{2}$  oz.

Foreign and Colonial Post Cards.—Official Post Cards, single and reply, are transmissible to all parts of the world. Single Cards are issued with impressed stamps of 1d., and Reply Cards bearing a stamp of the value of 1d. on each half. Inland Post Cards are also transmissible abroad if the additional postage required is supplied by means of postage stamps affixed to the Cards on the address side.

Foreign and Colonial Parcel Rates.—When alternative rates are available, the cheaper is here given. Parcels may be sent to the following places at the rates of 3 lb. 1s.; 7 lb. 2s.; and 11 lb. 3s.:—Aden, British East Africa, British Guiana, British Honduras, British N. Borneo, Ceylon, China, Egypt, India, Newfoundland and New Zealand. To the undermentioned places, the rates for parcels not exceeding 3 lb., 7 lb. and 11 lb. respectively, are as follows:—Argentine Republic, 2s. 4d., 3s. 7d., 4s. 1od.; Austria, 1s. 6d., 2s., 2s. 6d.; Belgium, 1s., 1s. 6d., 2s.; British Central Africa Protectorate, 2s., 3s., 4s.; Denmark, 1s., 1s. 6d., 2s.; France 1s. 4d., 1s. 9d., 2s. 2d.; Germany and Holland, 1s., 1s. 6d., 2s.; Italy, 1s. 6d., 2s., 2s. 6d.

Other places as follows, maximum weight allowed, 11 lb.; Canada, 1 lb. 8d., then 6d. per lb.; Cape Colony and Natal, 9d. each lb.; New South Wales, Queensland, S. Australia, Victoria, W. Australia and Tasmania, 1 lb. 1s., then 6d. per lb.; Rhodesia, 1s. 9d. each lb.;

Transvaal and Orange River Colony, 1s. each lb.

Parcels for many Foreign Countries and British Possessions may be insured at the rate of 5d. for £12, and 2½d. extra for every additional £12 up to £120. Parcels addressed to any Foreign Country, or to Australia, British Central Africa Protectorate, Canada, Cape Colony, Natal and other parts of South Africa, Fiji, Jamaica, Mauritius, New Zealand, Rhodesia (North-Eastern), Seychelles, Straits Settlements and Trinidad, may not contain a letter, even if sent to the addressee. Parcels for other British Possessions may contain a letter if addressed the same as the parcel, but packets of letters may not be sent by Parcel Post to any place abroad. An invoice in an open envelope simply giving particulars of the goods may be enclosed.

The maximum length and girth combined of parcels to India and the

Colonies generally is 6 ft.

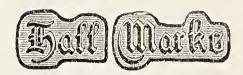
Foreign and Colonial Telegrams may be sent at the following charges per word:—Belgium, France, Germany and Holland, 2d.; Algeria, Luxemburg and Tunis,  $2\frac{1}{2}d$ .; Austria, Denmark, Gibraltar, Hungary, Italy, Norway, Portugal, Spain and Switzerland, 3d.; Bosnia-Herzegovina, Montenegro, Roumania, Servia and Sweden,  $3\frac{1}{2}d$ .; Bulgaria and Eastern Roumelia, 4d.; Malta, Russia and Tangier,  $4\frac{1}{2}d$ .; Spain (via Marseilles cable), 5d.; Greece, Greek Islands and Crete, 6d.; Turkey and Turkish Islands,  $6\frac{1}{2}d$ .; Tripoli, 7d.; Azores and Canary Islands, 9d.; Senegal and Sudan (French), 1s. 5d.; Cyprus (per Eastern Co.), 1s. In no case can a Foreign Telegram be sent for less than 10d



'Tabloid'
AND
'Soloid'

Invented
By
B.W.&Co.

Are B.W.&Co.



They mark the work of

Burroughs Wellcome & Co.

They mean "Issued by

Burroughs Wellcome & Co."
They stand for

24 CARAT products

Please report to us any cases of attempted imposition

### OBSTETRIC TABLE

The calculation is made from the last day of the last menstrual period.

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### INDEX TO DIARY PAGES

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GOOD FRIDAY ... MARCH 29
EASTER MONDAY ... APRIL I

WHIT MONDAY ... MAY 20
AUGUST BANK HOLIDAY ... AUGUST 5

CHRISTMAS DAY ... DECEMBER 25
BOXING DAY ... DECEMBER 26

# GOOD FRIDAY ... APRIL 17 EASTER MONDAY ... APRIL 20 WHIT MONDAY ... JUNE 8 AUGUST BANK HOLIDAY ... AUGUST 3 CHRISTMAS DAY ... DECEMBER 25

1908

Times of sunset at Greenwich are given for Sunday of each week; these enable lighting-up times for cyclists, motorists,

etc., to be approximately ascertained.

Boxing Day...

The phases of the moon, holidays and Quarter days given in the following pages are those applicable to England, except where otherwise stated.

DECEMBER 26

### OBSTETRIC

No.	NAME AND ADDRESS	When Engaged	When Expected
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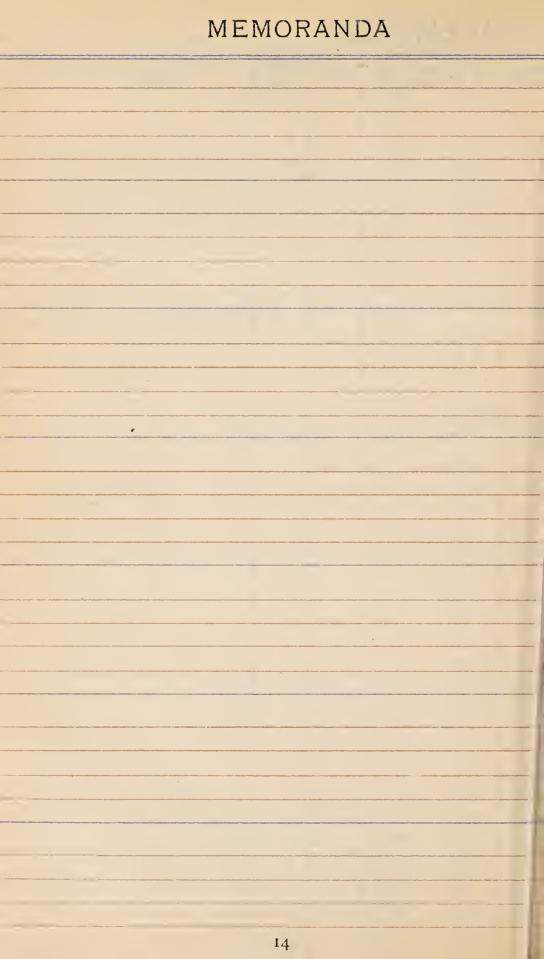
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## OBSTETRIC

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# JANUARY, 1907 1-Tues. Scotch Bank Holiday 2-WED. 3-THUR. 4-FRI. 5-SAT.

<u> </u>	JANUARY, 1907	7. ( Last Qr. 2.48 p.1
6–Sun. Epipha	any	
7-Mon.		
		9
8-Tues.		
9-WED.		
10-Thur.		
	•	
11—FRI.		
12-SAT.		

17

B

# JANUARY, 1907 20. Sun sets 4.24 21. ) First Qr. 8.42 a.m.

20–Sun. 2nd after Epiphany	
21-Mon.	M.
22-Tues.	
23-WED.	
0	
24-Thur.	
25-Fri.	5
26-SAT.	1 48

27. Sun sets 4.36 29. OFull Moon 1.45 p.m. JAN.—FEB., 19	07
27—Sun. Septuagesima	.11*= 1
28-Mon.	5-All 18
9-Tues.	
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O-WED.	
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1-Thur.	-07 A
-Fri. (February)	
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-SAT. Scotch Quarter Day, Candlemas	

# FEBRUARY, 1907 3. Sun sets 4.49 6. (Last Qr. 0.52 a.m.

3—Sun.	Sexagesima			
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<b>Sun.</b> Quinquagesima	
-Mon.	
-Tues.	
-WED.	
Thur.	
-FRI.	
SAT.	

# FEBRUARY, 1907 17. Sun sets 5.14 20. D First Qr. 4.35 a.m.

17–Sun. 1st in Lent	
18-Mon.	
19-Tues.	
20-Wed.	
21-Thur.	
22-FRI.	
ZZ FRI.	
02.5	
23-Sat.	

24. Sun sets 5.27 28. OFull Moon 6.23 a.m. FEB.-MAR., 1907 -Sun. 2nd in Lent 25-Mon. 26-Tues. 27-WED. 28-Thur. 1-FRI. (MARCH) 2-SAT.

### MARCH, 1907

3. Sun sets 5.40 7. ( Last Qr. 8.42 a.m.

3-Sun. 3rd in Lent

4-Mon.

5-Tues.

6-WED.

7-THUR.

8-FRI.

9-SAT.

24

17—wun.	Passion Sunday		
18-Mon.	Bank Holiday, Ireland		
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22-FRI.			
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25-SAT.			

Sun sets 6.16 OFull Moon 7.44 p.m. MARCH, 1907 4—Sun. Palm Sunday 1/11/25 5-Mon. Lady Day 6-Tues. -WED.

THUR.

-FRI. Good Friday Scotch Bank Holiday

SAT.

# MAR.—APRIL, 1907 3r. Sun sets 6.28 5. (Last Qr. 3.21 p.m.

31—Sill. Easter Day	10.3
1-Mon. (April) Easter Monday	
,	
2-Tues.	
3-WED.	1.000
4—Thur.	0.00
5-FRI.	
6-SAT.	

7. Sun sets 6.39
12. New Moon 7.6 p.m. APRIL, 1907

7-Sun. Low Sunday

8-Mon.

9-TUES.

10-WED.

11-THUR.

13-SAT.

12-FRI.

### APRIL, 1907

14. Sun sets 6.51 20. ) First Qr. 8.38 p.1

14-Sun. -2nd after Easter 15-Mon. 16-Tues. 17-WED. 18-Thur. 19-FRI.

20-SAT.

# 21. Sun sets 7.2 APRIL, 1907

14 M.

21–Sun. 3rd after Easter

22-Mon.

23-Tues.

24-WED.

25-Thur

26-FRI.

27-SAT

APRIL-MAY, 1907 28. 8	Sun sets 7.14 Last Qr. 9.54 p.m
28– <b>Sun.</b> 4th after Easter	
,	
29-Mon.	
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30-Tues.	, ,
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1-Wed. (May)	
I WED. (IMAY)	
0. T	
2-Thur.	
3—Fri.	
4-Sat.	

11-SAT.

### MAY, 1907

5– <b>Sun.</b> Rogation	Sunday	
6-Mon. Scotch Bo	ank Holiday	
7-Tues.	•	
8-WED.		424
O WED.	l s	
9-Thur.		
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10-F <sub>RI</sub> .		

- 12 Sun. Sunday after Ascension
- 13-Mon.
- 14-Tues.
  - .
  - 15-WED. Scotch Quarter Day, Whitsuntide
- 16-Thur.

17-FRI.

18-SAT.

19-Sun. Whit Sunday

20-Mon. Whit Monday

21-Tues.

22-WED.

23-Thur.

24-FRI.

25-SAT.

# MAY-JUNE, 1907 26. Sun sets 7.56 27. () Full Moon 2.18 p.m.

26-Sun.	Trinity Sunday		THE STATE
.27-Mon.			
	*		
		•	
28-Tues.			
			<del></del>
29-WED.			
20 77.25.			
30-Thur.			7 17
31-F <sub>RI</sub> .			
1-SAT. (J	UNE)		

2. Sun sets 8.4 3. (Last Qr. 5.20 a.m. JUNE, 1907 2–Sun. 1st after Trinity 3-Mon. 4-TUES. 5-WED. 6-THUR. 7-FRI.

8--SAT.

#### JUNE, 1907

9. Sun sets 8.11
10. NewMoon11.50 p.m.

- 9-Sun. 2nd after Trinity

- 10-Mon.
- 11-Tues.

12-WED.

13-Thur.

15-SAT.

- 14-FRL

- 38

16. Sun Sets 8.16 19. D First Qr. 2.55 a.m.  JUNE, 1907	
16—Sun. 3rd after Trinity	100
17-Mon.	
18-Tues.	
19-Wed.	)
20-Thur.	8 1177 F V
21—FRI.	
22—SAT.	

#### JUNE, 1907

23. Sun sets 8.18 25. OFull Moon 9.27 p.m.

23-Sun. 4th after Trinity

24-Mon. Midsummer Day

25-Tues.

26-WED.

\_\_\_\_

.

28-FRL

27-Thur.

30. Sun sets 8.18 2. ( Last Qr. 2.34 p.m. JUNE—JULY, 1907			
30-Sun. 5th after Trinity	0 20 5		
1-Mon. (July)			
•			
	1' .		
2-Tues.			
3-Wed.	r		
4—Thur.			
5-FRI.			
o i ni.			
6-SAT.			

#### JULY, 1907

7. Sun Sets 8.16 10. New Moon 3.17 p.mm

7–Sun. 6th after Trinity

8-Мон.

9-Tues.

10-WED.

11-Thur.

13-SAT.

12-FRL

#### JULY, 1907

00 L1, 100	
14–Sun. 7th after Trinity	100.12.0
15Mon.	- inter
16-Tues.	
17-WED.	
18—Thur.	0.710
19-FRI.	
20—SAT.	

21-Sun. 8th after Trinity

22-Mon.

23-Tues.

24-WED.

25-THUR.

27-SAT.

26-FRI.

28. Sun sets 7.54 1. ( Last Qr. 2.26 a.m. JULY—AUG., 1907 28-Sun. 9th after Trinity 29-Mon. 30-Tues. 31-WED. 1-THUR. (AUGUST) Scotch Quarter Day, Lammas 2-FRI.

#### AUGUST, 1907

4. Sun sets 7.43 9. ⊗New Moon 6.36 a.m.

4-9	ອີແເ	. 10	th ar	fter T	Trinity
	~ ***	• 4 40	un un	101 1	1 676663

5-Mon. Bank Holiday Scotch Bank Holiday

6-Tues.

7-WED.

8-Thur.

10-Sat.

9-FRI.

11. Sun sets 7.31 16. ) First Qr. 9.6 p.m.

AUGUST, 1907

11-	Sun.	11th after Trinity	,	0-12-71
				*
12-	-Mon.			* 7 :
		<del>,</del>		
10	Ture	,		
10-	Tues.			
			,	
-				
14-	WED.			
			•	
<b>1</b> 5-	Thur			
16-	-FRI.			
			6	
17-	-SAT,			
				•

# AUGUST, 1907 18. Sun sets 7.17 23. OFull Moono.15 p.m. 18–Sun. 12th after Trinity 19-Mon. 20-Tues. 21-WED. 22-Thur. 23-FRI.

48

25. Sun sets 7.3 30. (Last Qr. 5.28 p.m.) AUGUST. 1907	
25–Sun. 13th after Trinity	
	-
26-Mon.	
	•
27-Tues.	
28-Wed.	
29—Thur.	100
•	
30-FRI.	· · · ·
81—Sat.	.7.413.4
49	C

### SEPTEMBER, 1907

1. Sun sets 6.48-7. ● New Moon 9.4 p.n.

1–Sun. 14th after Trinity

2-Mon.

3-Tues.

4-WED.

5-Thur.

6-FRI.

#### 8. Sun sets 6.32 SEPTEMBER, 1907

	OBI TEME	, <u> </u>		
8-	Sun. 15th after Trinity		1,167	
		•		
			~~~~	
				<u> </u>
9-	-Mon.		-17	
10	Tues.		111	
11	-WED.		٠.	
	_			
12	Thur.			1 1
		4		
18	F <sub>RI</sub> .		4.7	Į.
				•
1				16

# SEPTEMBER, 1907 15. ) First Qr. 3.40 a.m.a. 15. Sun sets 6.16 21. () Full Moon 9.34 p.11

15– <b>Sun.</b> 16th after Trinity	1000
,	
16-Mon.	-
17-Tues.	
18-Wed.	0
19-Thur.	7.7
	•
20-Fri,	1
21—SAT.	

22–Sun. 17th after Trinity

23-Mon.

24-Tues.

25-WED.

26-Thur.

28-SAT.

27-FRI.

## SEPT.-OCT., 1907 29. (Last Qr. 11.37 a.m.)

29-Sun. 18th after Trinity Michaelmas Day 30-Mon. 1-Tues. (October) 2-WED. 3-THUR. 4-FRI. 5-SAT.

#### OCTOBER, 1907

13. Sun sets 5.12 14. ) First Qr. 10.2 a.m.

13-Sill. 20th after Trinity

4

14-Mon.

15-Tues.

16-WED.

17-Thur.

18-FRI.

20. Sun sets 4.57 21. OFull Moon 9.17 a.m.	OCTOBER, 1907	
20–Sun. 21st after	r Trinity	
21-Mon.	•	. ,
22-Tues.		1,211
02 \\/		
23-WED.		, 1
-		
24-Thur.		
25-F <sub>RI</sub> .		
26-SAT.		
		•
	الرائع	Ст
	57	

## OCT.-NOV., 1907 27. Sun sets 4.43 29. (Last Qr. 7.52 a.m.

27–Siii. 22nd after Trinity	
28-Mon.	
29-Tues.	
30-Wed.	
	•
31-Thur.	
·	
	,
1-Fri. (Nov.)	
2-SAT.	

Sun sets 4.30 NewMoon10.39p.m. NOVEMBER, 1907	
—Sim. 23rd after Trinity	
-Mon.	
-Tues.	
Wed.	
b	·
THUR.	
-F <sub>RI</sub> .	
-S <sub>A</sub> T.	

# NOVEMBER, 1907 10. Sun sets 4.18 12. ) First Qr. 5.14 p.m.

10—Sun.	24th after Trinity	
11-Mon.	Scotch Quarter Day, Martinmas	ξ
12-Tues.		
40 144		
13-WED.		:
	•	
14-Thur.		
14-THUR		
,		
15-FRI.		
	•	
16-SAT.		

17. 20. (	17. Sun sets 4.8 20. O Full Moon 0.4 a.m. NOVEMBER, 1907					
17-	Sun. 25th	after Trinity				
18-	-Mon.	<b>R</b>				
19-	-Tues.					
20	-WED.					
21-	-Тник.	`				
22	FRI.		4			
23-	-Ѕат.					

# NOVEMBER, 1907 24. Sun sets 4.0 28. (Last Qr. 4.21 a.r.) 24 - Sun. 26th after Trinity 25-Mon. 26-Tues. 27-WED. 28-Thur. 29-FRI. 30-SAT.

r. Sun sets 3.53. 5. NewMoon 10,22a.m. DECEMBER, 1907	
1–Sun. 1st in Advent	
·	
2-Mon.	-111
3-Tues.	1
	·
4-WED.	
5—Thur.	· · · · · · · · · · · · · · · · · · ·
,	·
6-Fri.	
7—SAT.	:

# DECEMBER, 1907 12. D First Qr. 2.16 a.m.

8–Sim. 2nd in Advent	
9-Mon.	
	<u> </u>
10-Tues.	
10 1025.	
·	
,	
11-WED.	-, - 2, ×
12—Thur.	
13-F <sub>RI</sub> .	*
TO TRI.	
14-SAT.	

15. Sun sets 3.49 19. OFull Moon 5.55 p.m. DECEMBER, 190	7
15—Sim. 3rd in Advent	3,770
16-Mon.	
17—Tues.	
18-WED.	•
19—Thur.	
00 [	
20-FRI.	
21—SAT.	

DECEMBER, 1907 22. Sun sets 3.51 (Last Qr. 11.11 p.m.
22-Sun. 4th in Advent
23 Mon.
•
24—Tues.
·
25-WED. Christmas Day. Scotch Bank Holiday
26—Thur. Bank Holiday
27-FRI.
28-SAT.

3. New Moon 9.43 p.m. DEC., 1907—JAN., 1908
29–Sun. 1st after Christmas
*
·
30-Mon.
OU WON.
31-Tues.
,
t .
1-WED. (JAN.) Scotch Bank Holiday
О. Т
2—Thur.
8-Fri.
4-SAT.

### JANUARY, 1908 5. Sun sets 4.3. 10. ) First Qr. 1.52 p.m.

5-Sun. 2nd after Christmas

6-Mon.

7-Tues.

8-WED.

9-THUR.

10-FRI.

12. Sun sets 4.12. 18. O Full Moon 1.36 p.m. JANUARY, 1908 12-Sun. 1st after Epiphany 13-Mon. 14-TUES. 15-WED. 16-THUR. 17-FRI.

# JANUARY, 1908 19. San sets 4.22

19-	Sun.	2nd after Epiphans	,	
20	-Mon,			0
21-	Tues.			(F 1)
22-	WED.			f
23-	-Thur.			,
24-	-Fri.			
25-	-Sat.			1 - 10

26. Sun sets 4.34. 26. (Last Qr. 3.1 p.m. JAN,—FEB., 1908 26-Sun. 3rd after Epiphany 27-Mon. 28-Tues. 29-WED. 30-Thur. 31-FRI.

1-SAT. (FEB.)

# FEBRUARY, 1908 2. New Moon 8.36 a.m. 2. Sun sets 4.47.

2–Sun. 4th after	Epiphany.	Scotch Quarte	er Day, Candle	mas ":"- "
3-Mon.				
				·
4-Tues.				
	,			
5-WED.				
6-Thur.				
7-FRI.				
/ FRI.				
8-SAT.				

9. D First Qr. 4.27 a.m. FEBRUARY, 1908

9–Sun. 5th after Epiphany	
10-Mon.	
11Tues.	10 ( 5)
	·
12-WED.	:
13-Thur.	0.041 00
-	
14-Fri.	
15—SAT.	241

# FEBRUARY, 1908 15. Sun sets 5.12 17. O Full Moon 9.5 a.m.

16- <b>S</b> un.	Septuagesima			line.	٦.
		·			
17-Mon.				4.0	11
18-Tues.			 	11	E . E
19-WED.			•	211/	701
20-Thur				1000	
	<u> </u>		 		
			 		-)
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21-FRI.					-1
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22-SAT.					0.7
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1-Sun. Quinquagesima

2-Mon.

3-Tues.

4-WED.

5-Thur.

6-FRI.

## 8. Sun sets 5.49 9. ) First Qr. 9.42 p.m. MARCH, 1908

	11, 1565
8–Sun. 1st in Lent	in the
9-Mon.	•
10-Tues.	
11-WED.	8.77
	·
12-Thur.	mer L. P.
13-FRI.	
14-SAT.	

77

#### MARCH, 1908

15. Sun sets 6.2 18. ○ Full Moon 2.28 a.m.

15-Sun. 2nd in Lent

16-Mon.

17-TUES. Irish Bank Holiday

18-WED.

19-Thur.

20-FRI.

ETEN TO THE

22-Sun. 3rd in Lent

23-Mon.

24-TUES.

25-WED. Lady Day

26-Thur.

27-FRI.

29–Sun. 4th in Lent	
30-Mon.	14-1 C
31—Tues.	1.7
	*,
1-Wed. (April)	- 14 M - 14
2-Thur.	70
3-Fri.	y + - ^ j
4-SAT.	-L2 -

5-	Sun.	Passion Sunday			•	, 57 57 -	171. 1 5
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			•				
6-	-Mon.					. श्वेडेडी	\$ - 1 \$ - 1
7-	TUES.					-17	, s . g
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			,	,			
8-	-WED.					* * * _ * _	
9-	THUR.					5/117	
to Control							
10	FRI.					, 11°1 §	
-				-			
							-
11	-SAT.					A	12.8
	,				*		

#### APRIL, 1908

12. Sun sets 6.48 16. O Full Moon 4.55 p.m

12-Sun. Palm Sunday " " " 13-Mon. 14-Tues. 15-WED. 16-Thur. 5013 14 17-FRI. Good Friday Scotch Bank Holiday

HILL. SIE

19-Sun. Easter Day

20-Mon. Easter Monday

21-Tues.

22-WED.

23-Thur.

24-FRI.

٠	APRIL	-MAY,	1908 30	Sun sets  New M	5 7.12 Moon 3.33	p.m.
<b>26–Sun.</b> <i>Lou</i>	Sunday		, ,		. 1	
27-Mon.			0.1,00	54.8	1 = 1	
28-Tues.						
20 1025.					1 2	
29-WED.					nt W	्स
30-Thur.					1111	<u></u>
1—Fri. (May)			,		1 3	· .
2—Sat.						
Z SAL					*	-

11.1.6 15

. . . W.

3—Sun. 2nd after Easter

4-Mon. Scotch Bank Holiday

5-Tues.

6-WED.

7-THUR.

8-FRI.

The state of the s

HILLYY 8

1 1, 5

10–Sim. 3rd after Easter

11-Mon.

12-Tues.

13-WED.

14-Thur.

15-Fri. Scotch Quarter Day, Whitsun

MAY, 1908

town to

HOM RO

1 3 /

. HO T 81

17—Sun. 4th after Easter

18-Mon.

19-TUES.

20-WED.

21-THUR.

23-SAT.

22-FRI.

87

198 31 Ext

24-Sun. Rogation Sunday

25-Mon.

26--Tues.

\_\_\_\_\_\_

27-WED.

28—Thur.

30-SAT.

29-FRI.

#### MAY-JUNE, 1908

31-Sun. Sunday after Ascension	
1-Mon. (June)	11/1
·	
2-Tues.	
	`
3-Wed.	
·	
4—Thur.	
	*
5-FRI.	
•	
6-SAT.	

7-Sun. Whit Sunday

8-Mon. Whit Monday

9-Tues.

10-WED.

11-Thur.

12-FRI.

### JUNE, 1908

14—Sun. Trinity Sunday 15-Mon. 16-TUES. 17-WED. 18-THUR. 19-FRI. 20-SAT.

21–Sun. 1st after Trinity

22-Mon.

23-Tues.

24-WED. Midsummer Day

25-Thur.

27-SAT.

26-FRI.

28. New Moon 4.31 p.m. JUNE—JULY, 1908 28. Sun sets 8.19	
28-Sun. 2nd after Trinity	0.7
•	
	•
29-Mon.	
30-Tues.	
· ·	
1-WED. (JULY)	W
2-Thur.	
	•
3-FRI.	
4-SAT.	

5-Sun. 3rd after Trinity

6-Mon.

7-Tues.

8-WED.

9-Thur.

10-FRI.

12. Sun sets 8.12 13. O Full Moon 9.47 p.m. JULY, 1908 12-Sun. 4th after Trinity 13-Mon. 14-Tues. 15-WED. 16-Thur. 17-FRI.

## JULY, 1908

19. Sun sets 8.5 20. ( Last Qr. 0.1 p.m.

19-Sill. 5th after Trinity

20-Mon.

21-Tues.

22-WED.

23-Thur.

24-FRI.

97

### AUGUST, 1908

2. Sun sets 7.46 5. ) First Qr. 9.40 a.m.

v C

2–Sun. 7th after Trinity

3-Mon. Bank Holiday. Scotch Bank Holiday

4-Tues.

5-WED.

6-Thur.

8-SAT.

7-FRI.

16. Sun sets 7.20 18. ( Last Qr. 9.25 p.m.

16-Sun. 9th after Trinity

17-Mon.

18-Tues.

19-WED.

\_\_\_\_\_

20-Thur.

\_\_\_\_\_

22-SAT.

21-FRI.

#### AUG.-SEPT., 1908 30. Sun sets 6.51 3. ) First Qr. 8.50 p.m.

30-Sun. 11th after Trinity	
31—Mon.	
OT WON.	
1-Tues. (Sept.)	1 - 7
2-WED.	j.
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	- Principal distance republic personal substitute side such appropria
3-Thur.	
4-Fri.	
5-SAT.	emaintenantenantenante productivamentenantenantenantenantenantenantenant
·	1

6. Sun sets 6.35 10. OFull Moon 0.23 p.m. SEPTEMBER, 1908		
6-Sun. 12th after Trinity		
	· · · · · · · · · · · · · · · · · · ·	
7-Mon.	1.	
8—Tues.	4	-
9-Wed.	1	
10—Тник.	1	
·		
11—FRI.		
		~
12-SAT.		*,

# SEPTEMBER, 1908 13. Sun sets 6.3 17. (Last Qr. 10.33 a.m.

_13-Sun.	13th after Trinity		
14-Mon.			
15-Tues.			
10 1023.			
16-WED.			
47 7			
17—Thur	•		. 111
		0	
18-Fri.			
10.0			
19—SAT.			<u> </u>

25-FRI.

#### SEPT.-OCT., 1908 27. Sun sets 5.47 3. ) First Qr. 6.13 a.m.

27-Sun. 15th after Trinity

28-Mon.

29-Tues. Michaelmas Day

30-WED.

1—Thur. (Oct.)

2-FRI.

4. Sun sets 5.38 9. O Full Moon 9.3 p.m. OCTOBER, 1908 4—Sun. 16th after Trinity 5-Mon. 6-Tues. 7-WED. 8-Thur. 9-FRI.

# OCTOBER, 1908 11. Sun sets 5.15 17. (Last Qr. 3.35 a.m.

11-Sun. 17th after Trinity		
12-Mon.		
13-Tues.		ľ
14-WED.		
15—Thur.		
	•	
16-Fri.		
17—SAT.		•

# 18. Sun sets 5.0 OCTOBER, 1908

18-	Sun.	18th after Trinity		. 1.		a. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	130°
			· · · · · · · · · · · · · · · · · · ·				
19-	-Mon.					p 21/2	C,
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20	Tues.					4 (1 4 2	30
21-	-WED.					1.14	
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22-	-Thur.						00
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<b>2</b> 3-	-F <sub>RI</sub> .					. NF:	:
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24-	-SAT.		equamental antiferrational through an indicated in the contract of the contrac				2

# OCTOBER, 1908 25. Sun sets 4.45 25. New Moon 6.46 a,m.

. 1. 1. 1. 1.

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25-Sun. 19th after Trinity

26-Mon.

27-TUES.

28-WED.

29-Thur.

31-SAT.

30-FRI.

# r. D First Qr. 2.16 p.m. r. Sun sets 4.33 NOVEMBER, 1908

1-	Sun. 20th after Trinity	
2-	Mon.	many C
		*
3-	Tues.	anti di
• 4-	WED.	otiv t.
5-	Thur.	, tite .
		·
6-	FRI.	m(E)
7-	-SAT.	NE WI

# NOVEMBER, 1908 8. Sun sets 4.21

8–Sun. 21st after Trinity		. 40%
9-Mon.		4 3 5
·		
10-Tues.		_=0/T
11 Mars 0 11 12 12 13 14 14		,
11-WED. Scotch Quarter Day, Martinma	S	
12-Thur.		1077 ;
40.17		
13-FRI.		nt t
14 -SAT.		1

15.	5. Sun sets 4.10 5. (Last Qr. 11.41 p.m. NOVEMBER, 1908			
15-	-Sun.	22nd after Trinity		ing the
16-	-Mon.		. 3	30 73
17-	-Tues.			
18-	-WED.			
19-	Thur.			
20	FRI.			
21-	-Sat.			e 1.0

## NOVEMBER, 1908 22. Sun sets 4.1 23. New Moon 9.53 p.m.

22-Sill. 23rd after Trinity

**2**3-Mon.

24-Tues.

25-WED.

.....

26-Thur.

28-SAT.

27-FRI.

29. Sun sets 2.54 30. ) First Qr. 9:44 p.m. NOV.—DEC., 1908	
29–Sun. 1st in Advent	\$   \$   \$   \$   \$   \$
	•
30-Mon.	. <sup>86</sup>
1—Tues. (Dec.)	· (1) 5
2-WED.	Λ (
·	
3-Thur.	white (t
4-FRI.	[F] (5
5—Sat.	T/ == 11.
·	
115	

	DECEMI	BER, 1908	6. Sun sets 3.50 7. O Full Moon 9.44 p.n
6– <b>Sun.</b> 2nd	in Advent		···· (1)- Or
7-Mon.			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
8-Tues.			
9WED.			.bl/ i.
10-Thur.			
11-F <sub>RI</sub> .			. 1
12-Sat.			, A <sup>C</sup>

14-Mon.

15-Tues.

16-Wed.

17-Thur.

18-F<sub>RI</sub>.

19-SAT.

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E

## DECEMBER, 1908 20. Sun sets 3.51 23. New Moonit.4

20–Sim. 4th in Advent	1/2
21-Mon.	
22-Tues.	
22 1023,	
`	
00 111	
23-WED.	· ·
24—Thur.	
25 -FRI. Christmas Day. Scotch Bank Holiday	
26-SAT. Bank Holiday	

27. Sun sets 3.55 30. ) First Qr. 5.39 a.m. DECEMBER, 1908	
27–Sim. 1st after Christmas	
28-Mon.	
29-Tues.	
30-Wed.	
31-Thur.	

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